**Pulse Widths – Integrated Charge - Linearity**

*For producing all ASICs in a given Cryocycle:*

* Create TimestampRT0.list that contains all Timestamps for the cryocycle
  + Make sure there are no spaces after each Timestamp on a line
  + Structure of list will read:
    - 20210814T101982
    - 20210815T112201
    - etc…
* Run GetFilenames.sh to produce timePathsRT0.list, which will create the full file names for the next scripts
  + List names will be a long path extension to the appropriate .ROOT file
* Open timestampappender.txt, copy the line of code and run it on the terminal line to edit the timepaths.list file
  + This is to make timepaths.list in the correct file format for the code
* Edit runpulseheight.sh to include the correct directory location and TimestampRT0, timePathRT0 files.
* Runpulseheight.sh will call on PulseHeight.sh – edit PulseHeight.sh to include IntegratedCharge.C in the bash script (or Linearity.C for Linearity analysis).
* Run runpulseheight.sh via sh runpulseheight.sh.
* Wait for code to finish – all files will be deposited into the directory (IC\_RT0 or LinearityRT0)
* Rename files to 20\_21\_22\_23\_ICRT0.dat (or 20\_21\_22\_23\_LinearityRT0) or whatever and export to local Desktop.
* From Desktop, use associated code to slice the files into individual ASIC files.

**Producing timePaths for a given Timestamp List (IntegratedCharge and Linearity)**

* Edit GetFileNames.sh to include the Timestamp list you want.
* Edit testtest.sh (what the GetFileNames.sh script calls) to produce the correct timePaths.list file
* Run ‘sh GetFileNames.sh’
* Open timestampappender.txt and copy the line of code.
* Run that copied command with the filename replaced.

**Creating .dat files from .list files for Mean, RMS, Gain**

* Create a timestamp .list file with the appropriate RT or CT timestamps (like above)
  + You will have to do it for RT and CT separately
* Edit Gain.sh to specify which directory the .dat files will go
  + CT and RT share the same directory (at least up to Cryocycle 20 [SecondBatch20 folder])
* Gain.sh is called by submit\_gain.sh, so you must edit submit\_gain.sh to go through the appropriate timestamp list file (either RT or CT)
* Run submit\_gain.sh with either b0 or b1 afterwards to denote which BL you want
  + >> submit\_gain.sh b0
* Files will be deposited into the folder of choice. From there you can edit the files into the appropriate b\_b\_b\_b\_CT20.dat files using the Chip\_Namer.sh file (and cp commands).
* Export files to local desktop and feed them into code to slice them into individual ASIC files (like above).