

Updating FST Offline Database

NOTE: Anywhere you see the path "/gpfs01/star/pwg/gwilks3", this should be replaced with wherever you copied the FST directory is used for this procedure. That being said, if you do not already have the files for this procedure, you should run the following command on rcf: ``cp -avR /gpfs01/star/pwg/gwilks3/FST /your/directory/``

1. Login to RCF and run: ``cd /gpfs01/star/pwg/gwilks3/FST/pedestals``.
2. Remove all old files in this directory: ``rm *``
3. On your local machine, sftp into daqman: ``sftp daqman`` (I have ssh config for this)
4. On daqman: ``cd /net/fst01/RTScache``
5. Use ``get fst_s1_pedestals_*_GOOD.txt`` command but replace selection wildcard with pedestal run numbers you want to update in the offline database.
6. On daqman: ``cd /net/fst02/RTScache``
7. Use ``get fst_s2_pedestals_*_GOOD.txt`` command but replace selection wildcard with pedestal run numbers you want to update in the offline database.
8. Return to local machine folder where pedestals are stored.
9. Transfer pedestals to RCF: ``sftp gwilks3@sftp.sdcc.bnl.gov:/gpfs01/star/pwg/gwilks3/FST/pedestals/. <<< $'put -r *``
10. Login to RCF and run: ``cd /gpfs01/star/pwg/gwilks3/FST/FstOffline/macro/database/TimeStamp``
11. In an internet browser window on your local machine, go to: <https://online.star.bnl.gov/RunLog/>
12. On the top of the screen where it says "DAQ TYPE:", check the box "ped" and then click the "Select" button in the top right of the screen. The screen will update and then where it says "Runs : XXX" on the top right of the screen, click the bolded number. Now you will see a list of all the pedestal runs with their timestamps.
13. Back to RCF terminal window, open the file "runTime_run23.txt"
14. Copy any of the pedestal run numbers and their timestamps (found in step 12) to the top of the file in the same format seen in the previous entries.
15. Then run: ``cd ../Calibrations``, this is where you will generate the files for the database.
16. Before running anything, make sure you have the directory tmp/: ``mkdir tmp``.
17. Run: ``./getPedList.sh`` and a file called "pedRunNumber_run23.list" should be produced with the pedestal run numbers in the same directory

that the pedestal files are stored.

18. Run `./preDatabase.sh``, this prepares everything for database entry.
19. Open `"subDatabase.sh"` and edit the variable `"date"` to reflect today's date.
20. Run `./subDatabase.sh``, this submits the pedestal values to the database.
21. Now you should check if the last entry pedestal values match what is currently on the database.
22. Open `"read_fst_pedNoise.C"` and find line 26 where it says `"dbMk->SetDateTime(20230720,1);"`. The date may not match yours, but you want to update it so that you can see the most recent entry. I suggest adding 1 day to the datetime listed here. So if today's date is 07/20/2023, change the datetime to `"20230721"`.
23. Read the last database entry and stuff the output into a log file:
``root4star -l -b -q read_fst_pedNoise.C > log20230720.txt``.
24. Open `"log20230720.txt"` or whatever you named the file and find the first line which reports a `"pedestal"` value. Should be line 10390. Compare with the file `"tmp/pedestals_XXXXXXXXX_unsorted.txt"` where `"XXXXXXXXX"` is the last pedestal run number that you used for this procedure. The 7th column in this file lists a pedestal value with decimals. You want to compare the number listed `log20230720.txt:ln10390` to `tmp/pedestals_XXXXXXXXX_unsorted.txt:ln1` ignoring the decimal points.
25. Repeat this 4 more times with the following line comparisons between `log20230720.txt:tmp/pedestals_XXXXXXXXX_unsorted.txt`
 1. 10393:2
 2. 10396:3
 3. 10399:4
 4. 10402:5
26. If these numbers match, all is well.
27. Update drupal log with information regarding this task: <https://drupal.star.bnl.gov/STAR/blog/gwilks3/FST-Operations-Run-23-07052023-08042023>