

## The Tracker Shift Station Arrangement at JSC POCC

This short tutorial will describe the arrangement of the tracker work station at JSC POCC and it is supposed to be used **in addition** to the official Tracker Shifter Guide.

**Tracker Cell. Phone: 321 7207 188 (dial first 91 from JSC POCC)**

### The computer account

- UserID: **tracker**
- Psw: **amspocc**

### The tracker user desktops arrangement

At the JSC POCC you find the following configuration concerning the desktops (enumerated from left to right).

#### DESKTOP #1:

- **Left screen:** 4 "watch" shells showing, from left to right, the last 50 files of:
  1. the House Keeping Low Rate blocks files (namely /Data/BLOCKS/HKLR/CDP/\*/\*);
  2. the science data blocks files (namely /Data/BLOCKS/SCIBPB/RT/\*/\*);
  3. the science "one minute root" files of the corresponding science blocks (namely /fcdat0/ROOT/PG/pcposj0\_Data/BLOCKS/SCIBPB/RT/\*/\*.root);
  4. the calibrations root files (namely /TrackerUser/Monitoring/scripts/Output/Cal\_DB\_\*.root);

Note: the \* stands for something that increase with time.

**To restore the 4 "watch" shells:** open a terminal and launch the script /TrackerUser/Monitoring/scripts/launch\_watch.sh

#### Shifter duties:

- Check if the 4 shells are being updated time by time, **if not:**
  - ◆ launch the script above, otherwise
  - ◆ check with the Command where the data are being placed (you are watching the SCIBPB)
- Check if the science blocks and the corresponding one minute root files matches in time, **if not** call either Vitali Choutko or Alberto Oliva. Also read <http://twiki.cern.ch/twiki/bin/view/AMS/TroubleShooting> (the password for the two machines reported is not written but is eto\_amslocal)
- Check if the data files matches in time with the calibration (see desktop #3), **if not:**
  - ◆ either the script which produces the calibration root files is not working (so restart it by typing in a terminal /TrackerUser/Monitoring/scripts/scanlib.py -B /Data/BLOCKS/SCIBPB/RT/-d -f /\*/\* )
  - ◆ or we are missing a calibration (so call the expert and alert the Lead)

**Note:** to check if the data files matches with the calibrations just open the last calibration file by typing /TrackerUser/Monitoring/scripts/Output/tkonline calibration\_name.root and the last one minute root file /fcdat0/ROOT/PG/pcposj0\_Data/BLOCKS/SCIBPB/RT/\*/tkonline data\_name.root" and check for the time.

**The data should be up to 30 minutes later than the calibration time.**

- **Right screen:**
  - ◆ 2 JLV1-Monitoring windows (to restore each one type in a terminal JLV1-M &):
    1. Trigger rates (loading directory /Data/BLOCKS/HKLR/CDP);

2. Anti rates (loading directory /Data/BLOCKS/HKLR/CDP);
- ◆ 1 Event Size Monitoring (to restore type in a terminal ESMC &). The directory is /Data/BLOCKS/SCIBPB/RT/

*Shifter duties:* check the nominal values.

Nominal values:

- Tracker event size:
- TRD event size:
- RICH event size:
- TOF event size:
- ECAL event size:

## DESKTOP #2:

- **Left screen:** one browser window with the following AMI, AMS Monitoring Interface, (<http://pcposj0:8081/welcome/show/index>) tabs:
  - ◆ Tracker Temperatures
  - ◆ Tracker Temperatures Plane 6
  - ◆ Tracker Temperatures Subcooling
  - ◆ JINF Currents
  - ◆ Power Group Summary
  - ◆ Current Summary
  - ◆ Event Size Single

*Shifter duties:* (for more details see the dedicated section in the Tracker Shifter's Guide available on AmsTracker.

- Temperatures: check if the tracker temperatures are **SMALLER than 35 °C. IF NOT:** call the expert and alert Lead and TTCS.
- Subcooling: check if the temperature difference between the set point (black) and the pump (red) is **LARGER than 3°C. If not:** alert Lead, TTCS and call the expert.

For the temperatures, in general, check you don't see any strange behaviour, fluctuations must be less than 1°C.

- Currents: all the currents should be around few microA.
- **Right screen:**
  - ◆ A window with the phonetic alphabet (the relative file is available on the Desktop folder)
  - ◆ A browser window with the following tabs:
    - ◇ The AMS E-Log (<http://pcposj0.local/elog/AMS/>)
    - ◇ The list of all 192 ladders with the relative TkId and HwId (HwIdTkIdName)
    - ◇ The online root files monitoring web page (<http://ams.pg.infn.it/online/index.php>).To open directly this page from the terminal type  
/TrackerUser/Monitoring/images/firefox last.php . Here you can find:
    - a directory for each data taking day, in each you will find the summary of the calibrations files and data files;
    - a link called last.php which shows the last calibration and data summary

**Note:** If this web page is not being updated the following scripts should be run: in /TrackerUser/Monitoring/scripts/ type create\_images.sh /Data/BLOCKS/SCIBPB/RT/ , BUT you first need to kill the previous process.

**Shifter duties** About the calibration: (more details in the Tracker shifter's Guide)

- **Check the pedestal distribution:** the overflows must be 0 and 385 for S-side and K-side respectively
- **Check the average noise level:** around 2.8 and 3.5 ADC for S-side and K-side respectively
- **Check the calibration bits:** bits 5 to 8 and 10 to 13 should be 0, while bit 9 S-side 4339, bit 9 K-side 3037, bit 14 S-side 64, bit 14 K-side 512. **If not:** report on the Twiki logbook.

About the data:

- **Check if there is NOT any suspicious behavior of some crate or ladder.**

If you need to look more in detail either the calibration or the data root files see the end of page 4 of this guide. You can find the dedicated shells in desktop #3. Then you will be able to look at all the features of the ladders, one by one, such as the pedestal mean amplitude and its sigma for each strip of that ladder, while for data the main quantities are the size for each ladder and the occupancy of the strips which should be the same level for most of them (see the Tracker Shifter's Guide for more details)

### DESKTOP #3:

- **Left screen:** two terminal window
  - ◆ one in `/TrakerUser/Monitoring/scripts/Output/` where by typing `tkonline calibration_name.root` you can open and check any calibration file you prefer.
  - ◆ one in `/fcdat0/ROOT/PG/pcposj0_Data/BLOCKS/SCIBPB/RT/*` where by typing `tkonline file_name.root` you can open and check any one minute root file.

Note: by typing `tkonline -w` a window with a list of all the calibration will appear.

- **Right screen:** one browser window with the following tabs:
  - ◆ List of the ladder which are known to have problems (<https://twiki.cern.ch/twiki/bin/view/Main/AmsTracker>)
  - ◆ The tracker twiki logbook page (<https://twiki.cern.ch/twiki/bin/view/Main/OnOrbit>)

DESKTOP #4: free working space

## Shifter duties summary

- **Monitoring the tracker temperatures**
- **Monitoring the set point temperature**
- **Check every calibration file and the relative correlation in time with the data files**
- **Have a look at the data files, looking for some suspicious behaviour**
- **Check if the scientific data are being stored regularly**

**Note A :** have a look also in the `SHIFTER GUIDE` file which is located in `/TrakerUser/`

**Note B :** if you want to see more data file all together in order to see more statistics, go into the directory containing the root data files and type : `"tkhadd <source_files.root>"`. For example `"tkhadd output.root 40*.root"`

**Note C:** another way to look at the last files is to run the following scripts:

`"TrakerUser/Monitoring/scripts/last_cal_own.sh /TrakerUser/Monitoring/scripts/Output/"` which produces the file `"last_cal.root"` in `"TrakerUser/Monitoring/last"` and

`"TrakerUser/Monitoring/scripts/last_one_minute.sh`

`/fcdat0/ROOT/PG/pcposj0_Data/BLOCKS/SCIBPB/RT/ "` which produces the file `"last_mon.root"` in `"TrakerUser/Monitoring/last"`. These files can be opened with the `"tkonline"` command as written above

-- Main.Matteo Palermo - 31-May-2011

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This topic: Main > OnShift

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