

## HOW TO TAKE A SHIFT (see also <http://www.rcnp.osaka-u.ac.jp/~yohei/work/>)

### DAQ (on leps07)

1. Start DAQ.

```
leps07:online>> NTPCOnline
```

2. Start online analyzer in another terminal, (**At present, online analyzer starts automatically.**)

When you need to start it by hand, do as follows:

```
leps07:online>> cd ~/user_UNIDAQ/bin
```

```
leps07:online>> ./ntpOn2.44 → ntpOn2.45 (from 2009May)
```

3. Start recorder. --> Click recorder button.

4. Start the run. --> Enter run number and comment. Click start button.

Do not use following characters in comment;

```
* [ ] { } > < ( )
```

5. Check online histograms.

```
leps07:online>> DAQNTPC paw
```

```
>> ntpcall [Other commands of online histograms: scaler, ndc, ntpctrig, etc.]
```

6. Record target condition, TPC pressure, and **solenoid temperature**.

If solenoid temperature is below **2.7mV**, call Yosoi (080-5333-0491).

7. Tune mirrors for laser injection and measure the polarization.

8. Stop the run. --> Click stop button.

1 run ≈ 1,000,000 events or 17GB (2009 Apr) or 3 hours

Please check datasize: >> ls -ltr /data20/online/2009May\*\*/

(Scripts to watch DAQ status and filesize:

```
leps07:online>> /home/online/ntpc/bin/ErrChkNTPC.sh
```

```
leps11:online>> /home/online/ntpc/bin/sizechk )
```

9. Print out histograms. (Don't have to do every run.)

In the terminal of "DAQNTPC paw",

```
>> printntpc --> print hit pattern of scintillators and DC's
```

(to print old run's histograms.

```
leps11:online>> =/user_UNIDAQ/bin/macro/offline.csh [run number] )
```

```
On leps11:online>> cd /home/online/ntpc/evdis-N8.14/bin
```

```
leps11:online>> ./run.sh [run number] --> print ADC's and TDC's of TPC
```

10. Fill the scaler information and TPC pressure, etc. to Excel file in the windows machine.

[Bring the cursor to date column and press "Ctrl-g". Data is filled automatically.]

### EVENT DISPLAY

```
leps11:online>> cd ntpc/evdis-N8.14/bin
```

```
leps11:online>> ./Evdsh [run number]
```

```
q|n|p>
```

enter -- next event

p – handle TPC: you can grab and rotate TPC with cursor.

To quit, click file tab and select "quit".

q – quit event display

## PEDESTAL RUN (on leps00)

0. Take Pedestal data for every 4 runs.
1. Make sure DAQ program of normal run finish completely.  
(See [\*])
2. **Switch trigger** for TPC FADC from LEPStrigger to Clock trigger.
3. Close laser shutter. (**At present, do not need to close laser shutter.** rev. 2009.04.16)
4. Login leps00 (Use telnet. To open X, type e.g. 'setenv DISPLAY 192.168.179.16:0.0')  
leps00:online>> cd ntpc/evdis-8.03ped
5. Run pedestal data taking.  
leps00:online>> ./mkped\_ntpc [run number]
6. Analyzer estimates pedestal level.  
If some channels have large or negative pedestal, their channel numbers are shown.  
(Press "q" to go ahead.)
7. If you find **negative pedestals**, try pedestal run again. (Change run #.)  
If negative channel doesn't disappear, tune the pedestal level.  
If you don't know how to tune, call Nakatsugawa.
8. **Return trigger** for TPC FADC from clock trigger to LEPStrigger  
and open laser shutter when it is closed.
9. Make sure DAQ program of pedestal run finish completely.

[\*] To exit DAQ, click 'file' tab of the "NTPC Online Monitor System" and select 'exit'.

After the message "Finished the script..... lep7v00" appears, execute 'ps x' and 'ipcs';  
Make sure all DAQ processes have been terminated and shared memory has been released.

If any processes are still alive, kill them.

```
leps07:online>> kill -9 [process id]
```

If shared memory is not released, execute next command;

```
leps07:online>> Reset_local yes
```

Try "ps x" and "ipcs" again.

If there still exist shmids, check cpid by "ipcs -p" and "kill [cpid]".

## SOLENOID

Check temperature (CGR1) of solenoid. (IP camera <http://192.168.20.253>)

If the temperature is below **2.7 mV**, call Yosoi (080-5333-0491)

Keep watching solenoid current. →<http://ayagiku/cgi-bin/proto/frame0.py?id=122136>

at the Windows machine lepdell01 near the printer. (This page can not be seen in other PCs.)

If solenoid quenches, current goes down to 0 A and temperature rises (CGR1 → ~0 mV).

### In case of solenoid quenching

1. Call shift leader of SP8 operators. (Get phone number from status page)  
→ 「ソレノイドがクエンチしました。軌道に影響がないか確認してください。」
2. Call Yosoi. (080-5333-0491)
3. Do not open the hatch.