

HPS Trigger Commissioning Plan for 3/23/2015

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After completing the beam tuning to the Faraday Cup (beam in write spot, beam profile ok, halo counters ok, target in, ...), take data with different trigger configurations as follows:

- establish 50 nA beam current
 - set the trigger file to be hps_trigger_commissioning_ALLTRIGGERS.cnf following the instruction in the next page;
 - start the data acquisition using HPSECAL configuration
 - take 1 M events or 30 min long run;
 - record all information about the run in the logbook; if the DAQ crashes during the run or when you end the run, take another run;
 - change configuration file as specified in the next page and repeat the above procedure;
- use all the following trigger files:
- hps_trigger_commissioning_PULSER.cnf
 - hps_trigger_commissioning_PAIRS0.cnf
 - hps_trigger_commissioning_PAIRS1.cnf
 - hps_trigger_commissioning_SINGLES0.cnf
 - hps_trigger_commissioning_SINGLES1.cnf
- lower the beam current to 10 nA and, if time allows, repeat the whole procedure.

HOW TO CHANGE TRIGGER CONFIGURATION FILE

Open a terminal on a clon machine (e.g. clonpc16, clonl3, ...) and go to the folder \$CLON_PARMS/ssp

```
> cd $CLON_PARMS/ssp
```

the configuration file is defined by the file clasdev.cnf. This is a symbolic link to a local file. To change the configuration file, therefore it is sufficient to remove the symbolic link and to create a new one with the same name pointing to the configuration files you want to use. For example:

```
> rm clasdev.cnf
> ln -s hps_trigger_commissioning_PAIRS0.cnf clasdev.cnf
```

The configuration files that can be selected are:

```
hps_trigger_commissioning_ALLTRIGGERS.cnf
hps_trigger_commissioning_PAIRS0.cnf
hps_trigger_commissioning_PAIRS1.cnf
hps_trigger_commissioning_PULSER.cnf
hps_trigger_commissioning_SINGLES0.cnf
hps_trigger_commissioning_SINGLES1.cnf
```

After changing the link, to load the new configuration file:

- end the run
- click on Abort
- click on Configure
 - choose the configuration HPSECAL and click OK
- click Download, Prestart and Go

Note: the pulser rate in is presently set to 10 Khz in hps_trigger_commissioning_PULSER.cnf and to 500 Hz in hps_trigger_commissioning_ALLTRIGGERS.cnf