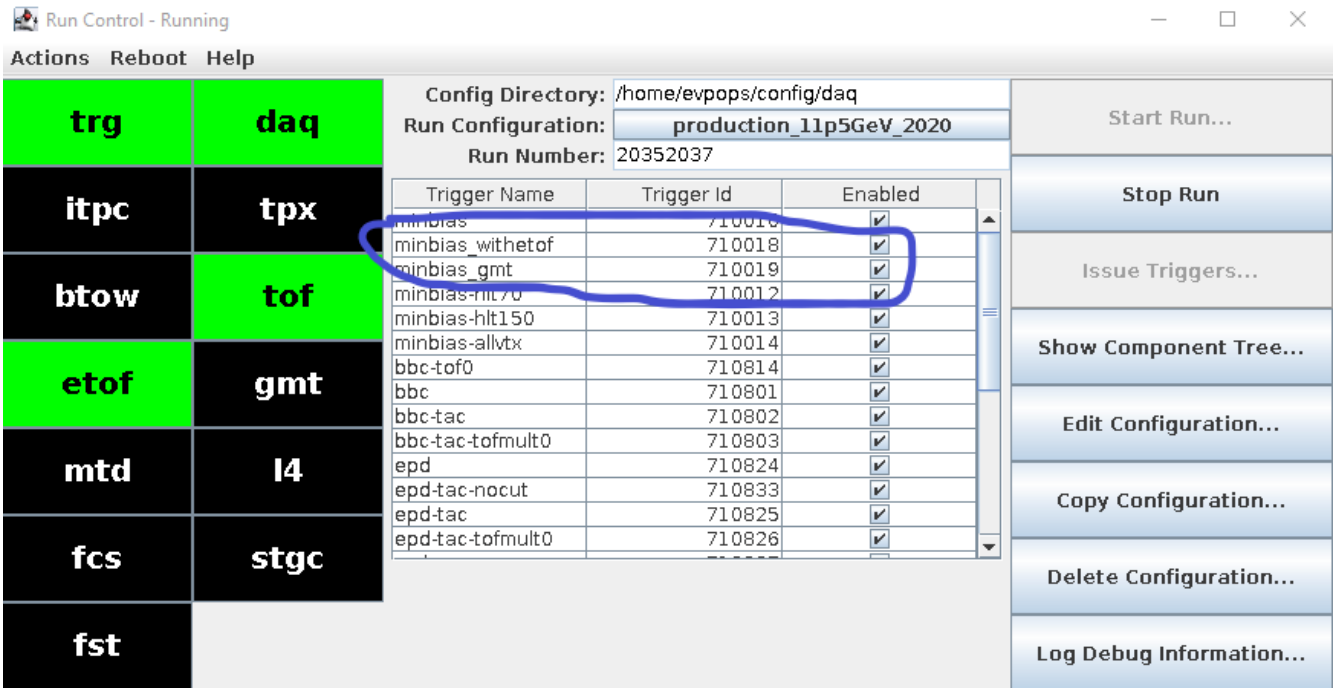
Procedure for including ETOF in runs while ramping up/down.

The idea of the new procedure for the ETOF is that there should be only one run per fill. Unless there are other problems, there is no need to start/stop runs for the ETOF. Assuming that the ETOF low voltages are ready the procedure is:

1. Do NOT wait for ETOF to finish ramping it's high voltages. Start the run as soon as the other STAR detectors are running and include the ETOF in all production runs.
2. After the ETOF high voltages are ramped, clear the ETOF busy.
3. The ETOF detector will start accumulating events. The "minbias-withetof" events should also begin accumulating.
4. 2 minutes before the beam is to be dumped, assert the ETOF busy, and then ramp the ETOF down while the run continues.
5. Stop the run immediately before dumping the beam.

The following describes the steps above in more detail:

There is now another trigger in the production configuration called "minbias_withetof". This is a copy of the minbias trigger which requires ETOF be present in the event. The previously existing triggers,

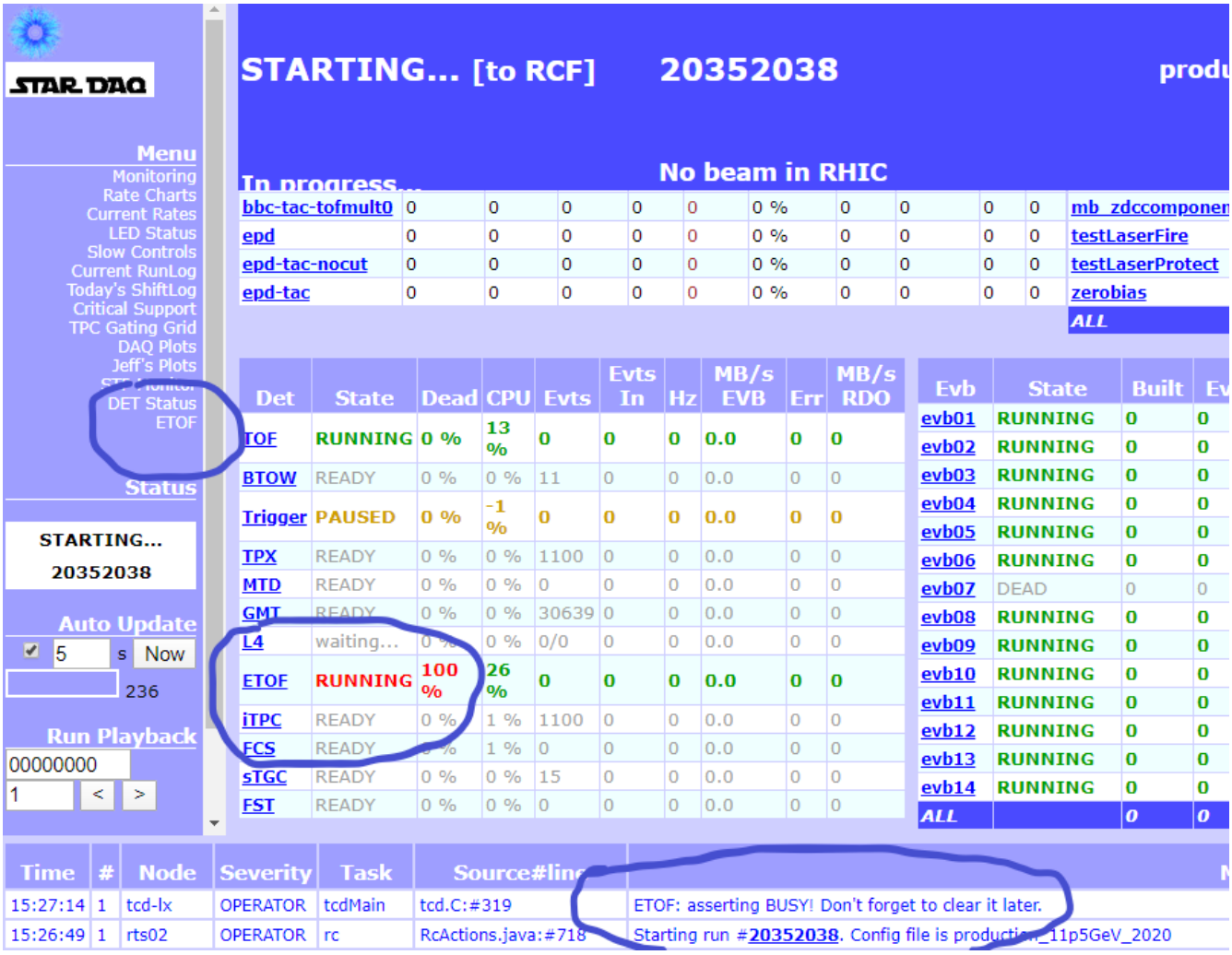


“minbias”, “minbias-hlt70”, may or may not have the ETOF. Prior to 12/18/19 the ETOF was required by these triggers except when the ETOF detector was not included in the run, so it was already necessary to check whether ETOF was present in the events. Now it will be possible for the ETOF detector to be absent from these triggers a specific times during the run, and present at other times.

The operational change is that if the ETOF low voltages are ready, the ETOF should always be included in the run. The “minbias_withetof” should always remain clicked in on the run control. It will be automatically disabled if the ETOF detector is not included in the run.

Start of the run:

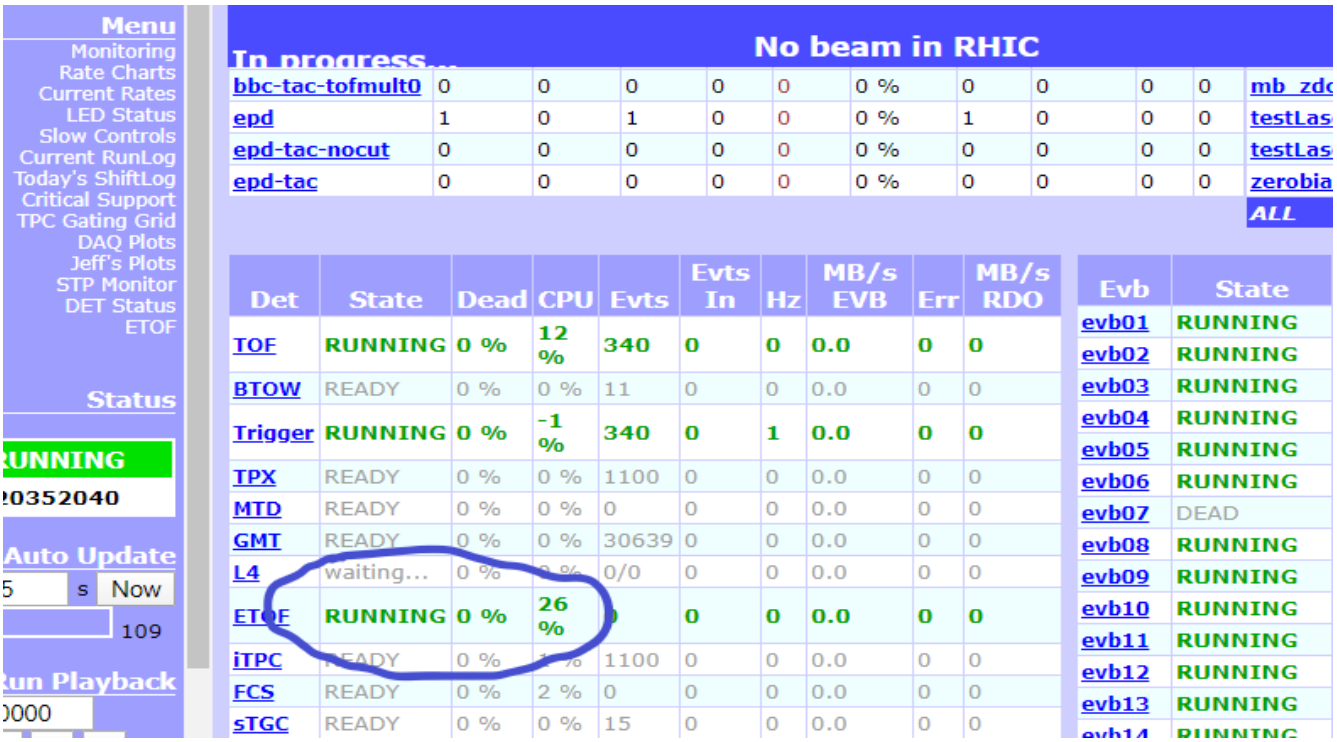
When the run is started, you will see an operator message stating, “ETOF: asserting BUSY! Don’t forget to clear it later. You will also see that the “Dead” column in the detector list for ETOF is red and has the value 100%. This means that the ETOF is not taking data. During this time the ETOF should be ramping it’s high voltages.



After ETOF High Voltages are finished ramping:

At this point one must clear the ETOF busy. To do this, press the “ETOF” link under “Menu” on the left hand panel of the Monitoring screen to obtain:

On this screen, click “Clear Busy”. There will be no action visible on this screen but if you go back to the “monitoring” tab you will see that the ETOF busy has gone away:



Ramp down the ETOF High Voltages:

In this case, simply follow the same step as above but press the “Assert Busy” button. Once the ETOF deadtime goes back to 100% it is safe to ramp the ETOF High Voltages down.