

## General processing path

To create a new Hlt2 line for the Turbo stream, you will need to make sure the line contains the particles in the event (and calculates all the required information on them). Note that other particles in the event can be selected with another Turbo Hlt2 line if needed.

After the line has been made, a new settings file is required so that it is included when Moore runs. A new TCK is then required to test this(+). Then Moore can be re-run and the output processed by Tesla.

- (+)Running from ThresholdSettings is possible but requires the user to update the HltANNSvc by hand (see steps 7, 9 and 10).
- (+)Those wishing to run from threshold settings are strongly advised to follow the MakeLineForTurboSimplified tutorial instead.

## Detailed steps

1) We can first setup the Moore build that we need.

```
lb-dev Moore <latest version>
cd Moore_<latest version>
git lb-use Hlt
git lb-use Moore
git lb-checkout Hlt/2016-patches Hlt/Hlt2Lines
git lb-checkout Hlt/2016-patches Hlt/HltSettings
git lb-checkout Moore/2016-patches Hlt/Moore
make
make install
```

2) Make the required Hlt2 lines specifying "Turbo = True" when making the line declaration, e.g.

```
line = Hlt2Line(name
                ,prescale=self.prescale
                ,postscale=self.postscale
                ,algos=algoList
                ,Turbo=True
                )
```

(Then "cmt make" in the Hlt/Hlt2Lines/cmt folder)

3) Add the lines to Hlt/HltSettings/python/HltSettings/TurboTest.py

(Then "cmt make" in the Hlt/HltSettings/cmt folder)

4) Move the raw event in to a place that Moore expects it to be

```
./run gaudirun.py PrepMC.py
```

- Sample PrepMC.py can be found at: </afs/cern.ch/work/s/sbenson/public/forTeslaExtendedReps/>

5) The L0 must be re-simulated with the L0 TCK we will use (direct to your DSTs).

```
./run gaudirun.py ReRun_L0.py
```

- Sample ReRun\_L0.py can be found at: </afs/cern.ch/work/s/sbenson/public/forTeslaExtendedReps/>

6) (If running the HLT from threshold settings then skip this step)

## MakeLineForTurbo < LHCb < TWiki

Make a PrivateTCK from the TurboTest threshold setting following the instructions on the linked dedicated Twiki.

- Sample GenTCK.py can be found at: /afs/cern.ch/work/s/sbenson/public/forTeslaExtendedReps/

7) The Hlt is ready to be re-run producing our updated selection reports (direct to your DSTs).

```
./run gaudirun.py RemakeSelReports_NewLine.py
```

or if running from threshold settings:

```
./run gaudirun.py RemakeSelReports_THRESHOLD.py
```

- Sample RemakeSelReports\_NewLine.py(RemakeSelReports\_THRESHOLD.py) can be found at: /afs/cern.ch/work/s/sbenson/public/forTeslaExtendedReps/

8) Need a DaVinci environment to run Tesla

9) Finally, run the Tesla algorithm

```
lb-run DaVinci <latest> gaudirun.py Turbo_NewLine.py
```

or if running from threshold settings:

```
lb-run DaVinci <latest> gaudirun.py Turbo_THRESHOLD.py
```

Note particles will be placed according to the name of your HltLine, i.e. "/Event/Hlt2IncPhi/Particles".

- Sample Turbo\_NewLine.py(Turbo\_THRESHOLD.py) can be found in the options folder of Tesla

10) You can now direct DecayTreeTuple to '/Event/HLTLINENAME/Particles'. Requires the DaVinci environment with at least v36r2!!!

```
lb-run DaVinci <latest> gaudirun.py TupleToolsCheck_MC_Tutorial.py
```

- Sample TupleToolsCheck\_MC\_Tutorial.py can be found at: /afs/cern.ch/work/s/sbenson/public/forTeslaExtendedReps/

11) Missing variables should be added to the RunningListTurboMissing page.

-- SeanBenson - 2014-12-08

---

This topic: LHCb > MakeLineForTurbo  
Topic revision: r12 - 2016-07-03 - SeanBenson



Copyright &© 2008-2020 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.  
Ideas, requests, problems regarding TWiki? Send feedback