

New Lepton+Track Triggers

TAU_CMUP8_TRACK5_ISO - modified, 3D cone isolation

TAU_NONISO_CMUP8_ISO_v1 - new Trigger: unusolated Tau + Isolated Lepton

STATUS: the triggers are not in yet

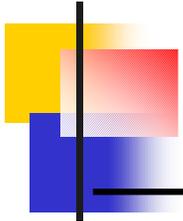
We should look into the trigger table they are testing to check if those 2 triggers are in.

We want a new trigger to extend coverage into plug region:

Level 1: L1_EM8

Level 2: Nothing exists -> will have to write and test

Level 3: -> have to write and test it



Plug Lepton+Track

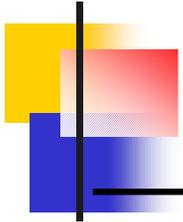
Level 2: have to output low rate

Central: we can match the calorimeter cluster with
the track -> CEM cluster + matched track

Plug : will have to use cluster energy isolation*
since there are no tracks in plug

Level3 : we can use Phoenix tracking which uses
Calor and Silicon in the same manner both for
Central and Plug -> cluster + matched
Phoenix track

* - this means that we will be selecting electrons



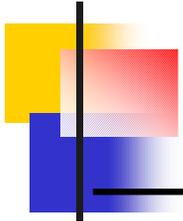
Plug Lepton+Track Status

To study rates at L2 and L3 we can use the calibration sample with L2_PS2500_L1_EM8 trigger bit on– **stripped and ready for use**

The code is being developed:

L2: the AC++ module exists to duplicate L2 decision -> write tcl file – **in progress**

L3 is easy: have to build the tcl file and check the rates – **almost ready**



Current Trigger Rates

New COT configuration -> Lepton + Track L2 output is high.

To avoid prescaling we could use
CEM cluster + matched track
part to study if we can reduce the rate