

Level 1 Muon Trigger Terms Description Version 2.0 November 8, 2001

L1MUO trigger manager terms are defined by **MUO(Mult,PT,Eta,Scint,Wire,Option)**. A short description of each term is given below. Note that while many different terms are possible using the above descriptor, a smaller number are actually implemented in the hardware. For example, one could define "Scintillator Tight" as AB, AB or AC, AB or BC, AB or AC or BC, AB_xB_xC, or A_xBA_xC. Clearly, all of them will not be used during collider running. Thus all of them can be formed but the hardware only uses one or two during running. See the current octant trigger decisions for those combinations that are presently implemented.

MUO(Mult,PT,Eta,Scint,Wire,Option)

where

Mult = Muon multiplicity

Choices = 0,1,2

Notes: 3 is generally not implemented but could be if the need arises

PT = P_T threshold

Choices = PTX, PT1, PT2, PT3, PT4

Notes: Up to this point we have taken PT1, PT2, PT3, PT4 to be >2, >4, >7, >11 GeV/c

The thresholds are inclusive

X means the L1CFT is not used

Eta = η region

Choices = C, A, W, N, S, M, T, O, U

Notes:

C defined as $0.0 < |\eta| < 1.0$

W defined as $0.0 < |\eta| < 1.5$

A defined as $0.0 < |\eta| < 2.0$

N defined as $-1.0 > \eta > -1.5$

O defined as $-1.5 > \eta > -2.0$

P defined as $-1.0 > \eta > -2.0$

S defined as $1.0 < \eta < 1.5$

T defined as $1.5 < \eta < 2.0$

U defined as $1.0 < \eta < 2.0$

B defined as $-2.0 < \eta < 2.0$ but not $-1.0 < \eta < 1.0$

Scint = MTC05 (L1CFT and scintillator) trigger quality

Choices = L, T, X, E

Notes: L = Loose, T = Tight, X = not used, E = experimental

See the Octant Trigger Decision document for the current definitions of Loose and Tight.

Wire = MTC10 (Wire and scintillator) trigger quality

Choices = L, T, X, E

Notes: L = Loose, T = Tight, X = not used, E = Experimental

See the Octant Trigger Decision document for the current definitions of Loose and Tight.

Option = Various additional options

Choices = S, O, X, H, L, A, B, C, E, T, Y, Z

Notes: S = Same sign, O = Opposite sign, X = Don't care, H = High mass, L = Low mass, A = A-layer only, B = B-layer only, C = C-layer only, E = Experimental, T = BOT, Y = always on, Z = always off