

Repeated Events?

- Looked at periods C + D with the output TTree
- Wrote out run/event numbers after all analysis cuts
- Analyzed run/event list to search repeated events
- Hypothesis: events can end up in each stream selected by triggers which are not included in our analysis flag:
E.g.: mu15 selects weak muon candidate in event with good electron
=> event ends up in both muon and egamma streams
- Not enough information in the TTrees to test this hypothesis

Region	Total	Duplicated	Fraction
Pre-tag	1358150	27443	2%
0 tag	1145156	21620	1.9%
1 tag	197751	5121	2.5%
2 tag	15243	704	4.6%

Examples: repeated events only

====> run 206368 evt 58691322:

e-trig: 1 mu-trig: 0
Signal muons: 0 **Signal electrons: 1** (require sum==1)
muon trigger: 0 Signal muons: 0 (require match)
elec trigger: 1 Signal electrons: 1 (require match)
Loose muons: 0 loose electrons: 1 (require sum==1)
MET: 115459 limits: > 25000]
mTW: 50122.9 limits: [40000,120000]
Nr.signal jets: 2
Nr.loose jets: 2
Nr.b-jets: 2
Nr. ID electrons: 13
LH(v.loose/ med / tight) = 1/1/1; index(sig./loose) = 0/0
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 59/59
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 949303864/949303864
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 59/59
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 0/0
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 0/0
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 257/257
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 0/0
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 1479472432/1479472432
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 11050/11050
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 74/73
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 50331648/50331648
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 1439084240/1439084240
Nr. ID muons: 2
LH(calor/ comb / standal.) = 0/1/0; index(sig./loose) = 0/0
LH(calor/ comb / standal.) = 1/0/0; index(sig./loose) = 0/0

====> run 206368 evt 37983146:

e-trig: 1 mu-trig: 0
Signal muons: 0 **Signal electrons: 1** (require sum==1)
muon trigger: 0 Signal muons: 0 (require match)
elec trigger: 1 Signal electrons: 1 (require match)
Loose muons: 0 loose electrons: 1 (require sum==1)
MET: 48027 limits: > 25000]
mTW: 84674.3 limits: [40000,120000]
Nr.signal jets: 2
Nr.loose jets: 2
Nr.b-jets: 2
Nr. ID electrons: 3
LH(v.loose/ med / tight) = 1/1/1; index(sig./loose) = 0/0
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 59/59
LH(v.loose/ med / tight) = 0/0/0; index(sig./loose) = 949303864/949303864
Nr. ID muons: 3
LH(calor/ comb / standal.) = 0/1/0; index(sig./loose) = 1/1
LH(calor/ comb / standal.) = 1/0/0; index(sig./loose) = 0/0
LH(calor/ comb / standal.) = 1/0/0; index(sig./loose) = 458760/524296

- All events I saw have both electron and muon candidates of varying tightness
- Index of leptons not properly filled