

WWyy work status(6th week)

for hh pair search

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wwyy validation

- Thanks Biagio for pointing out the problem

- 6 categories...

1) $h \rightarrow y y, h \rightarrow w^+ w^-$	48503/50000	97.006%	we want
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2) $h \rightarrow y y, h \rightarrow w^+ w^- y$	751/50000	1.502%	
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3) $h \rightarrow w^+ w^- y, h \rightarrow w^+ w^-$	728/50000	1.456%	
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Also, this solves previous problem: >2 leptons

4) $h \rightarrow w^+ w^- y y, h \rightarrow w^+ w^-$	9/50000	0.018%	
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5) $h \rightarrow w^+ w^- y, h \rightarrow w^+ w^- y$	6/50000	0.012%	
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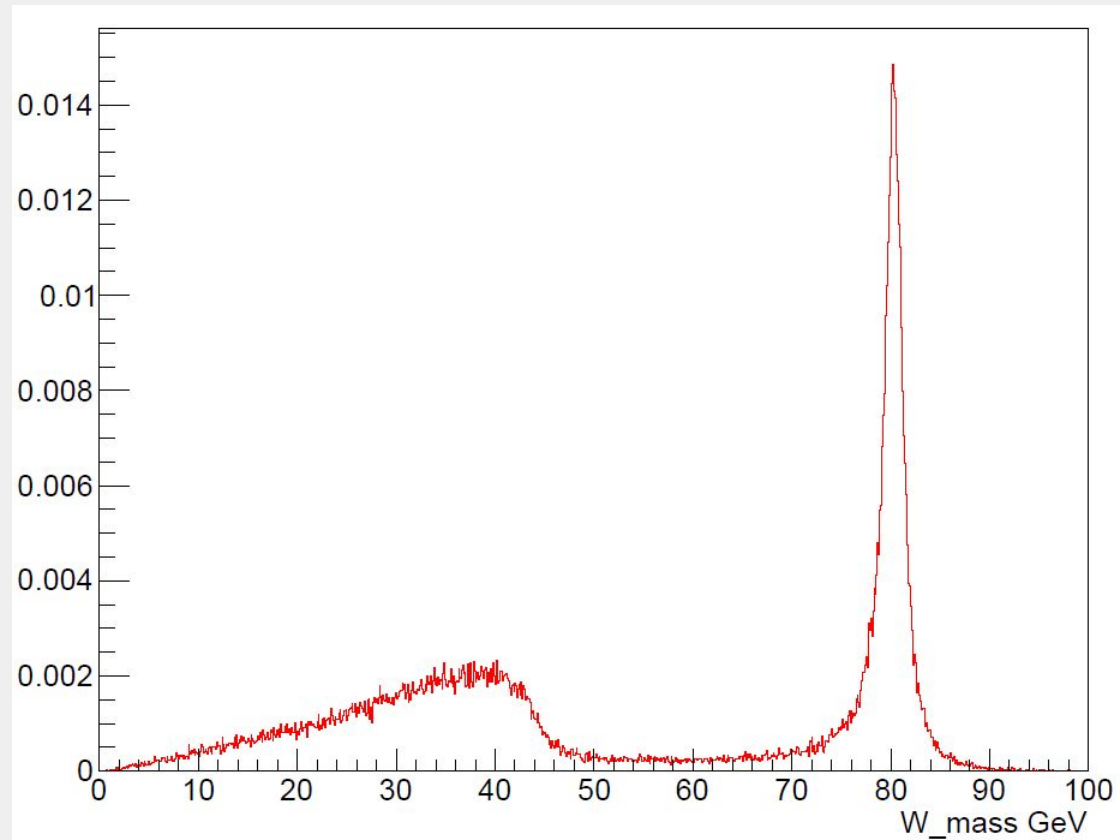
6) $h \rightarrow w^+ w^- y y, h \rightarrow y y$	3/50000	0.006%	
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For our validation plots submitted on JIRA, I just consider 1), OK?

Should we modify our Filters? If so, how?

```
#-----  
# Generator Filters  
#-----  
from GeneratorFilters.GeneratorFiltersConf import ParentChildFilter  
filtSeq += ParentChildFilter("hyyFilter", PDGParent = [25], PDGChild = [22])  
filtSeq += ParentChildFilter("hWWFilter", PDGParent = [25], PDGChild = [24])  
filtSeq.Expression = "hyyFilter and hWWFilter"
```

on/off shell plots

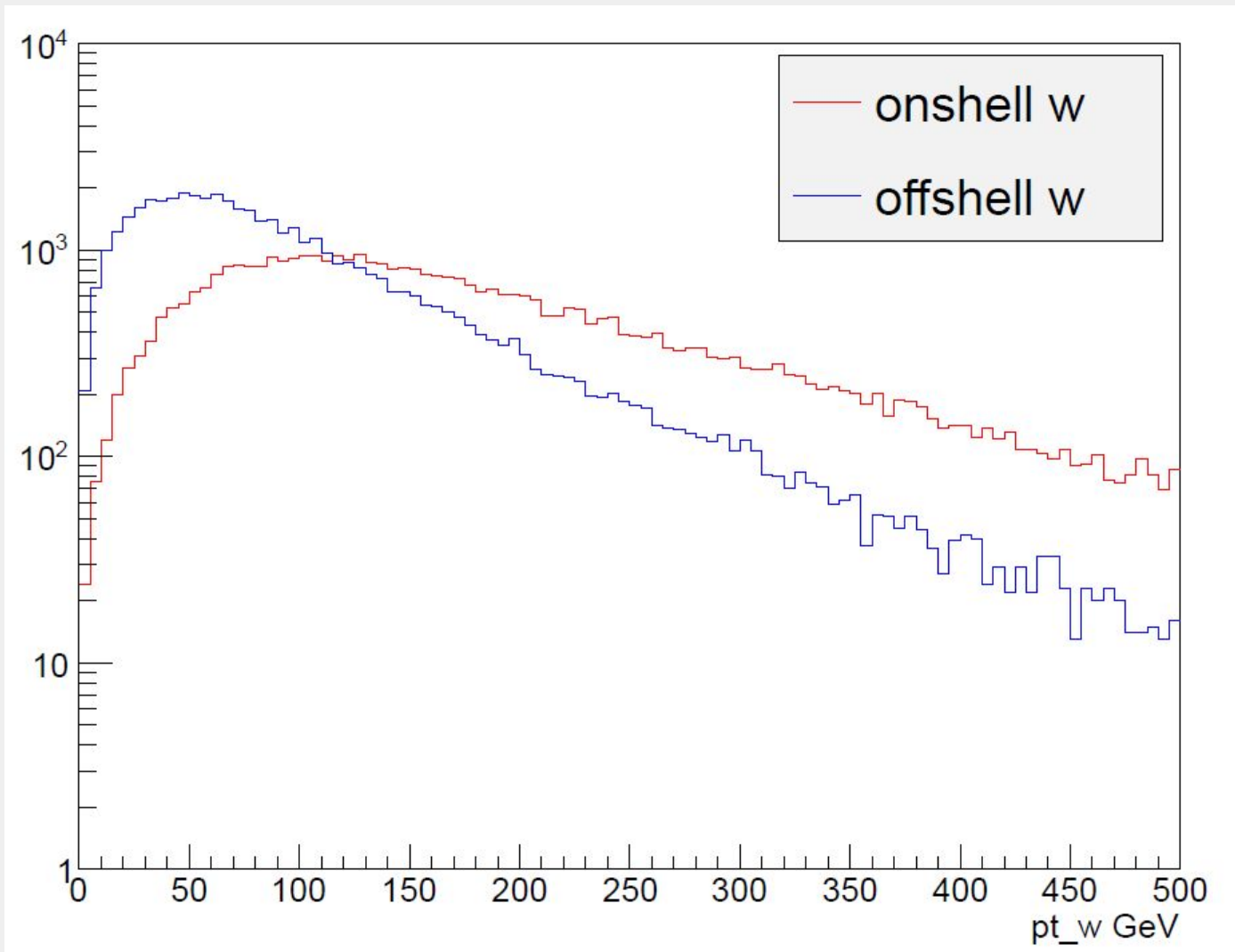


- according to the plot above, consider

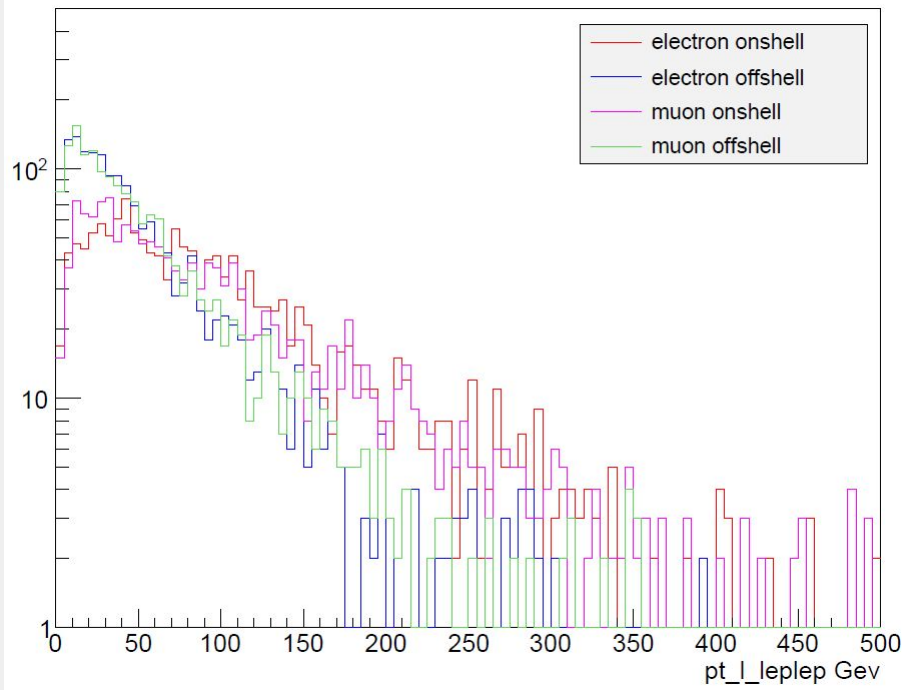
$|m_w| < 10 \text{ GeV}$ on-shell

$m_w < 50 \text{ GeV}$ off-shell

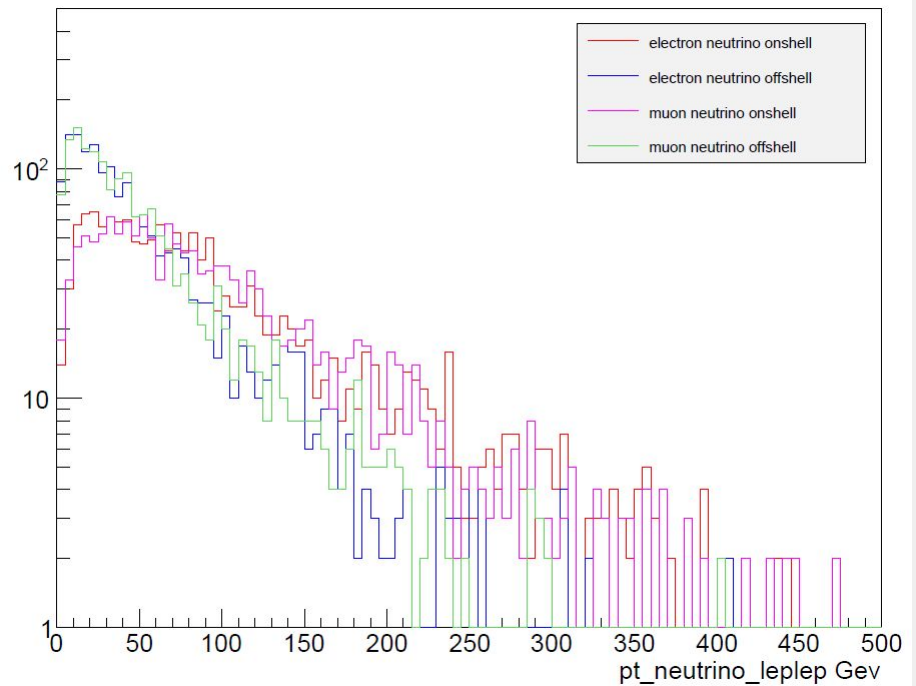
pt_w



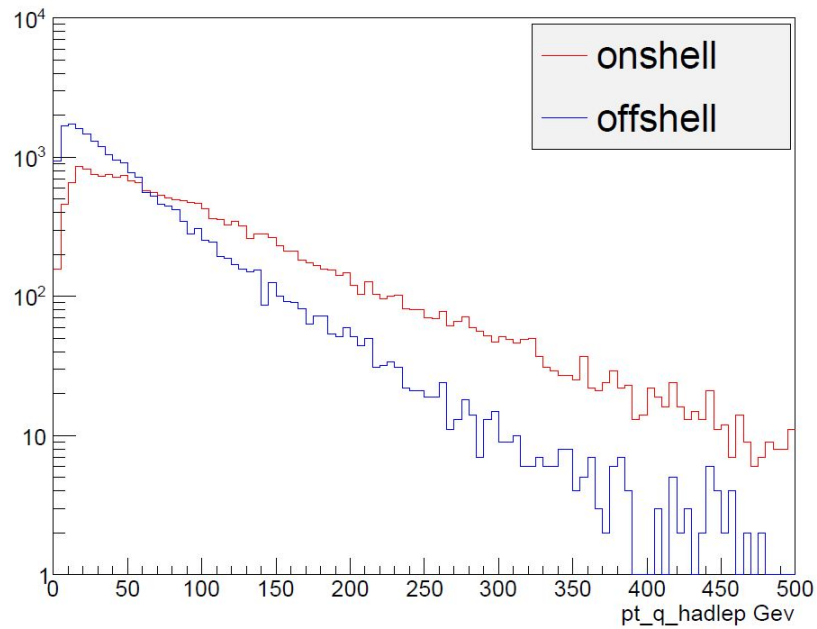
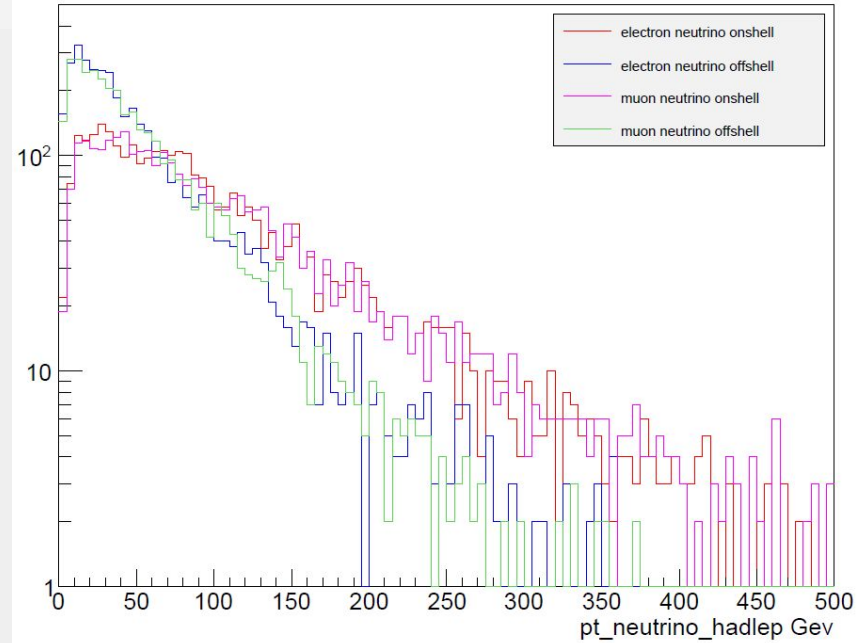
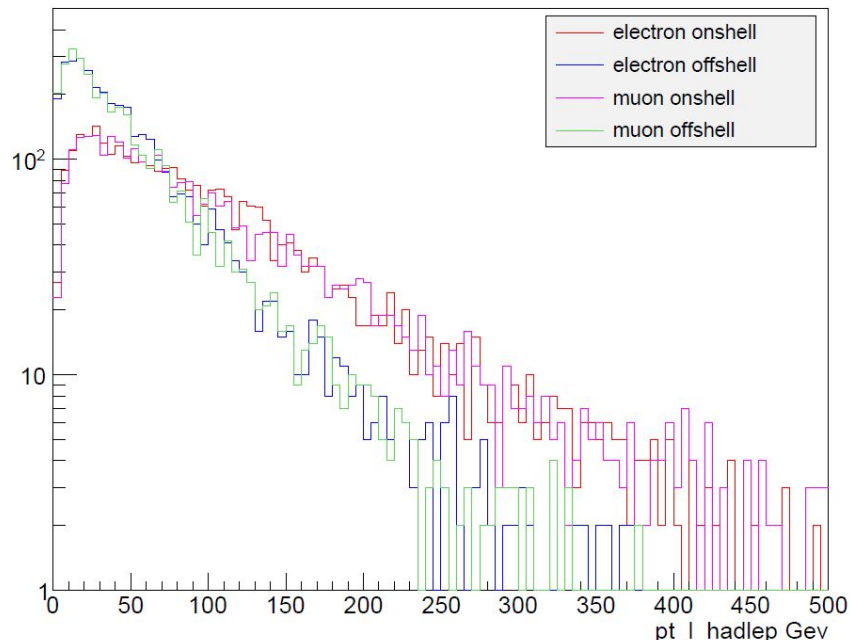
lelep channel: pt



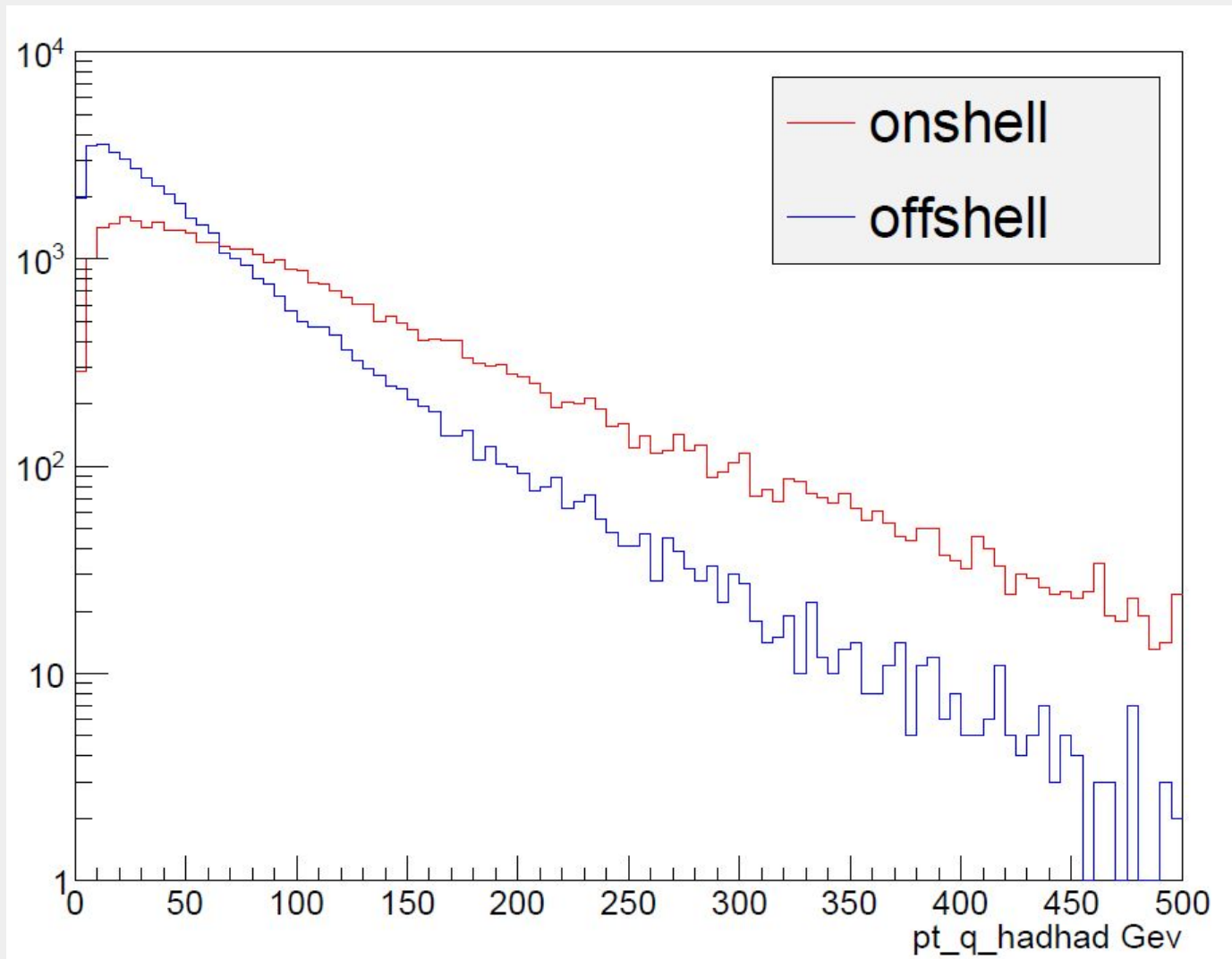
Both contain children of taus



hadlep channel: pt



hadhad channel: pt



Summary&To do

- ⦿ bkg samples: jobs killed, still working on it...Hope tommorrow can figure it out
- ⦿ Backward jet + H, Huijun is working on it.
- ⦿ Qualification task: no progress, should retrieve it and carry on next week