

Framework Progress Update

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Overview

- ▶ Synchronisation update
- ▶ Twiki with instructions can be found [here](#)

General progress update

- ▶ Light trees for all samples are accessible through xrootd:
 - Also have a skim with Joao and AMs QCD pre-selection (323MB)
- ▶ Scripts to support running the framework on the Imperial and CERN batch systems have been fixed.

W mu/e nu background synch

- ▶ Fully synched already
- ▶ Remain in synch with the minor changes made for the other backgrounds described below

Number	Old FW	New FW
$W \rightarrow \mu\nu$	65.1	65.1
$W \rightarrow e\nu$	68.3	68.3

Z background synch

- Problem found with $m_{\mu\mu gen}$ variable
- Fixed and now numbers agree

Number	Old FW	New FW
NSMC EWK	5.6	5.6
NSMC QCD	26.0	26.0
NCMC EWK	4.2	4.2
NCMC QCD	20.2	20.2
NCDData	13	13
NCBkg	0.15	0.15
Result	104.9	104.9

W taunu background synch

- ▶ Existing W background module applied tight lepton ID weights to control region
 - $W \rightarrow \tau \nu$ background needs loose ID weights in control region
- ▶ Minor difference in control region selection identified
 - Old FW required $n_{\tau} \geq 1$
 - New FW required $n_{\tau} = 1$
- ▶ Both issues fixed in new FW

Number	Old FW	New FW
NSMC	111.8	111.8
NCMC	39.2	39.2
NCData	30	30
NCBkg	17.5	17.5
Result	35.7	35.7

QCD background synch

- ▶ Old FW code revived
 - MC estimate of Z and W backgrounds is used instead of data driven
- ▶ New FW code written
- ▶ Agreed first time

Number	Old FW	New FW
NADData	5734	5734
NBData	913	913
NCData	810	810
NABkg	190.2	190.2
NBBkg	609.9	609.9
NCBkg	66.5	66.5
Result	40.7	40.7

Conclusions

- ▶ New framework now fully synched with old
 - Instructions to try it out can be found [here](#)
- ▶ Light Ntuples are in DCache for old preselection and new preselection

Backup

Paper BKG Estimates

Background	Paper estimate	Rereco estimate
Zmumu	99	105
Wmumu	67	65
Wenu	63	68
Wtaunu	53	36
QCD	31	41
Total	313	315