
SUMMARY

- DATI processati da Martino:
 - Trees -> /eos/user/m/mcentonz/CxAODReader_output/out_ZV2Lep_TCC_EMTopo/fetch/data-MVATree/
- DATI processati da Gabriele:
 - Trees -> /eos/user/c/chiodini/CONDOR_output/ZV2Lep_TCC_EMTopo_Nopass/fetch/data-MVATree/
 - File con tutti gli istogrammi: /eos/user/c/chiodini/CONDOR_output/ZV2Lep_TCC_EMTopo_Nopass/fetch/all.root
- Configuration file used to process data: /afs/cern.ch/work/c/chiodini/public/VV/CxAODReader_VVSemileptonic/CxAODReader_VVSemileptonic/data/ZV2Lep_TCC_EMTopo.cfg
- MC di bkg e dati 2015-6 (36 fb⁻¹) v33-08 (Rob L)
- Processing Martino & Gabriele consistenti

SUMMARY

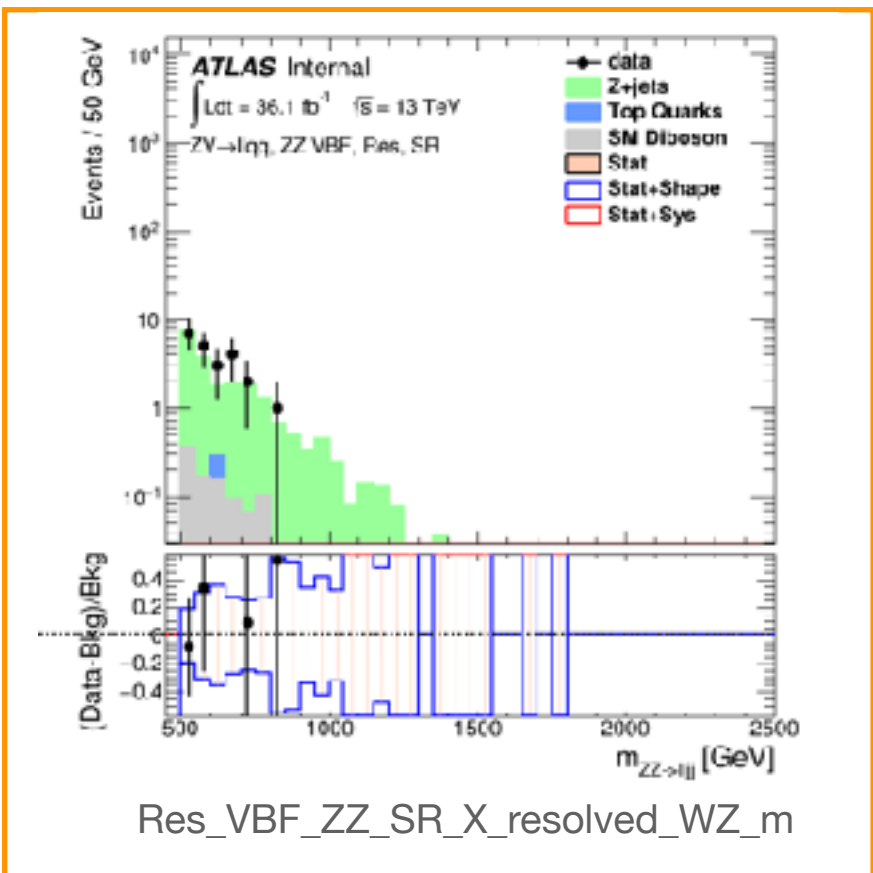
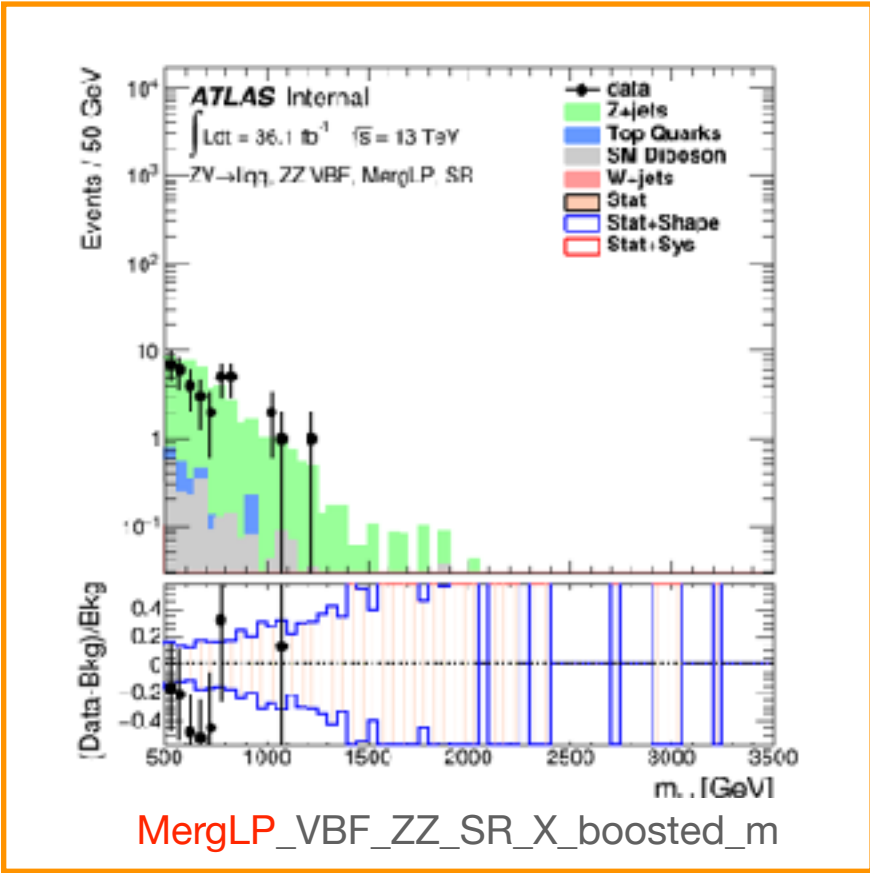
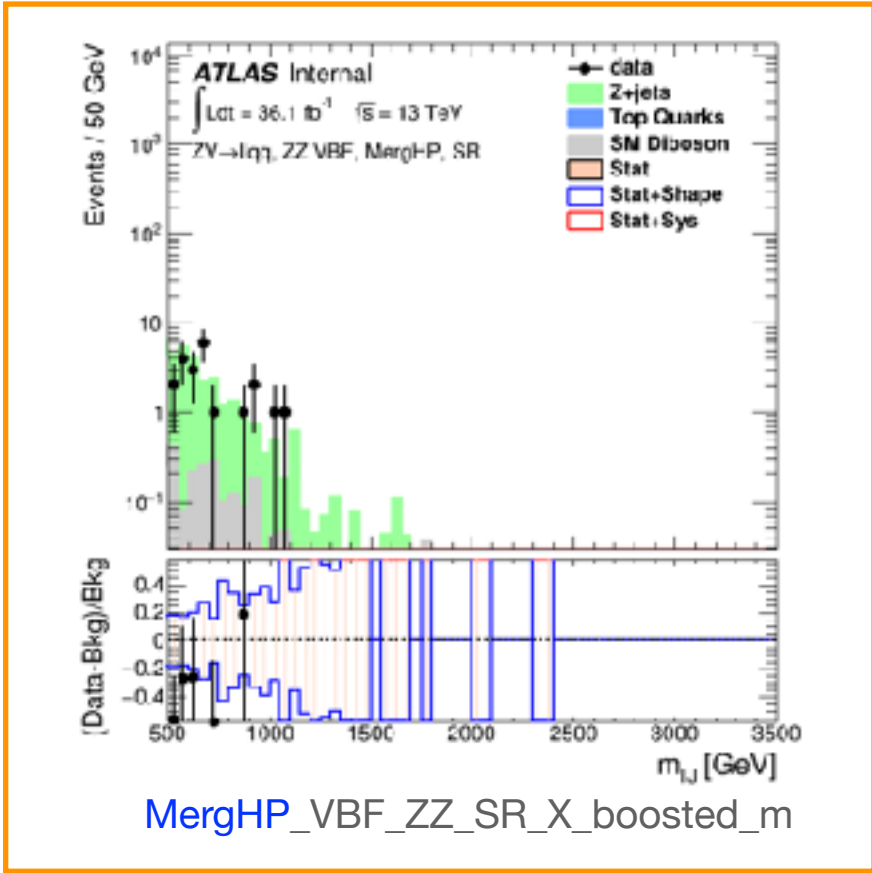
- Il mio codice: sotto [/afs/le.infn.it/user/s/spagnolo/atlas/Physics/DBLexot/CxAODReader2021](https://afs.le.infn.it/user/s/spagnolo/atlas/Physics/DBLexot/CxAODReader2021)
 - `source easytreeplotter/setup.sh` -per avere una versione di root utile per tutte queste macro/codici
- Per produrre istogrammi dai tree:
 - in `somePlotsMSC`
 - `root -l .x NewTreePlotter.C.` (ora `NewTreePlotter_ss.C`)
 - usa il package `easytreeplotter`, basato su Root data frames per ottenere ~velocemente istogrammi da trees
 - conosce la struttura dei dati del Reader (Nome del tree, campioni);
 - gli occorre: path dei tree (es. `/eos/user/c/chiodini/CONDOR_output/ZV2Lep_TCC_EMTopo_Nopass/fetch/data-MVATree/`)
 - definisci degli istogrammi, es.
`AddPlot("X_boosted_m", "X_boosted_m", "m_{llJ}", 100, 500., 5000., "weight");`
 - e poi `FillHist(sinfo, hists, "Pass_MergHP_GGF_ZZ_Tag_SR");`

SUMMARY - DISTRIBUZIONI DA TREE

- Il mio codice: sotto [/afs/le.infn.it/user/s/spagnolo/atlas/Physics/DBLexot/CxAODReader2021](#)
 - Per fare i plot dati vs MC
 - In CxAODReader_VVSemileptonic/CxAODReader_VVSemileptonic/macros/
 - Root runCxAODPlots_Syst.cxx
 - Che usa makePlotsSSfromTree.cxx (copia di ***makePlots2Lepton_Syst.cxx*** specializzata per i nomi degli istogrammi ottenuti dai tree) su summaryMSCprova.root (output del NewTreePlotter_ss.C)
 - Tutti i plots and full output da Martino's run su TTC_EMTopo are in
 - [/afs/le.infn.it/user/s/spagnolo/atlas/Physics/DBLexot/CxAODReader2021/CxAODReader_VVSemileptonic/CxAODReader_VVSemileptonic/macros/summaryMSCprova_1](#)
 - C_Nominal_Pass*Taglio*Variabile(_Log).png/eps

-
-
- Histograms from Tree [TTC-EMTopo]
 - All SR
 - All ZCR

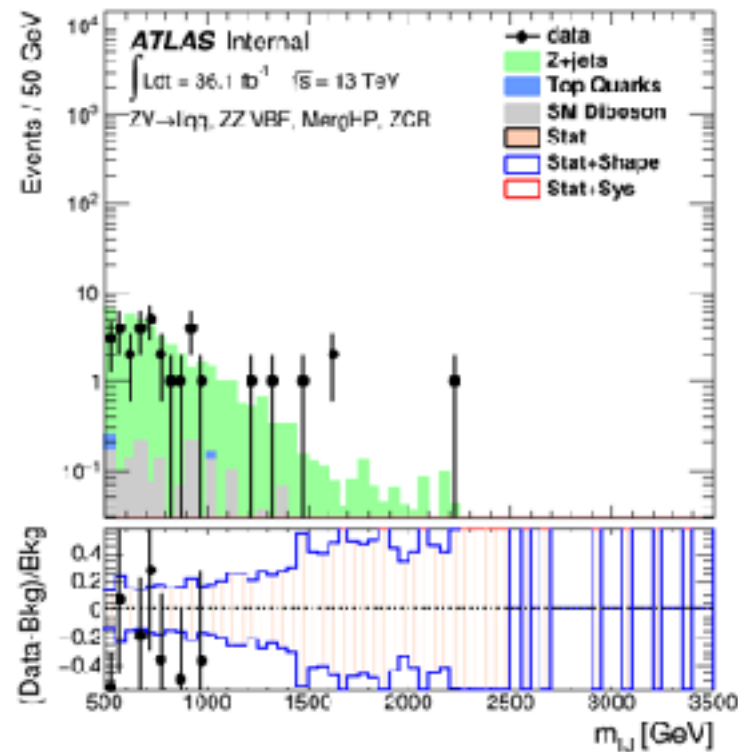
ZZ SIGNAL REGIONS



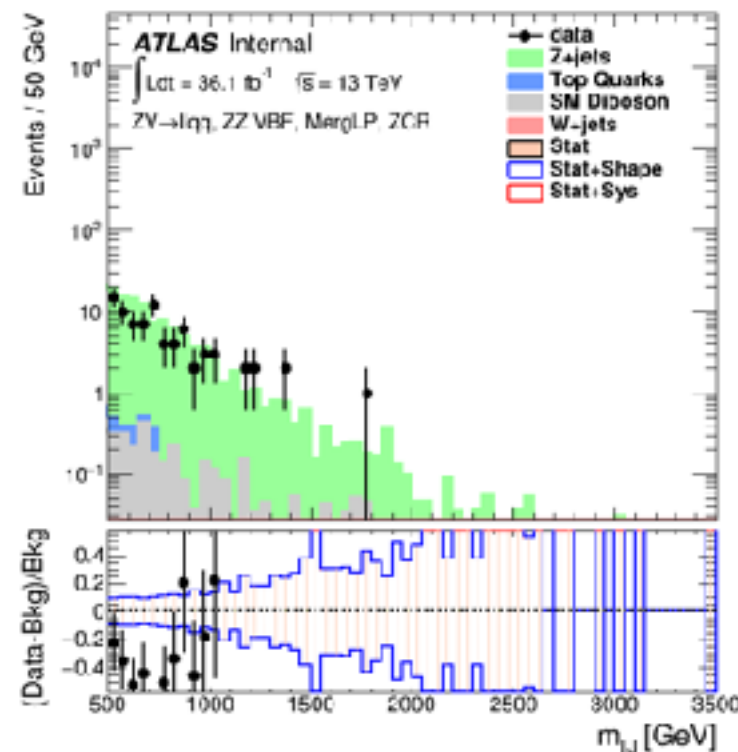
summaryMSCprova_1/yield_Nominal_Pass_Res_VBF_ZZ_SR.txt

sampleName	entries	integral	error	error/integ.
Zjet	2734	181.473	9.0304	0.0497617
stop	5	1.16518	0.539544	0.463055
ttbar	131	8.21078	0.884217	0.10769
Diboson	337	6.31881	0.549333	0.0869361
Wjet	0	0	0	0
bkg:	3207	197.167		
Data	165	165		

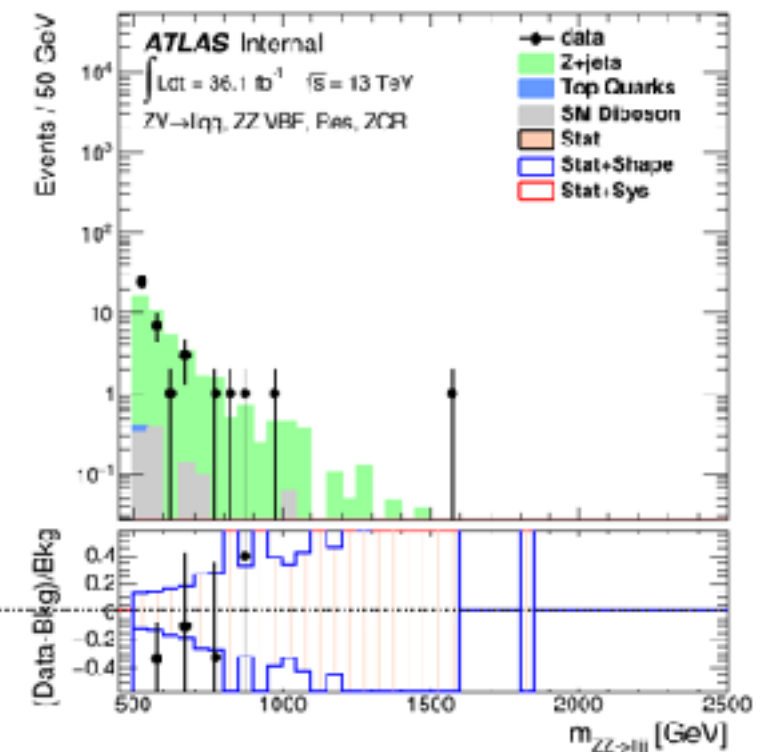
ZZ ZCONTROL REGIONS



MergHP_VBF_ZZ_ZCR_X_boosted_m

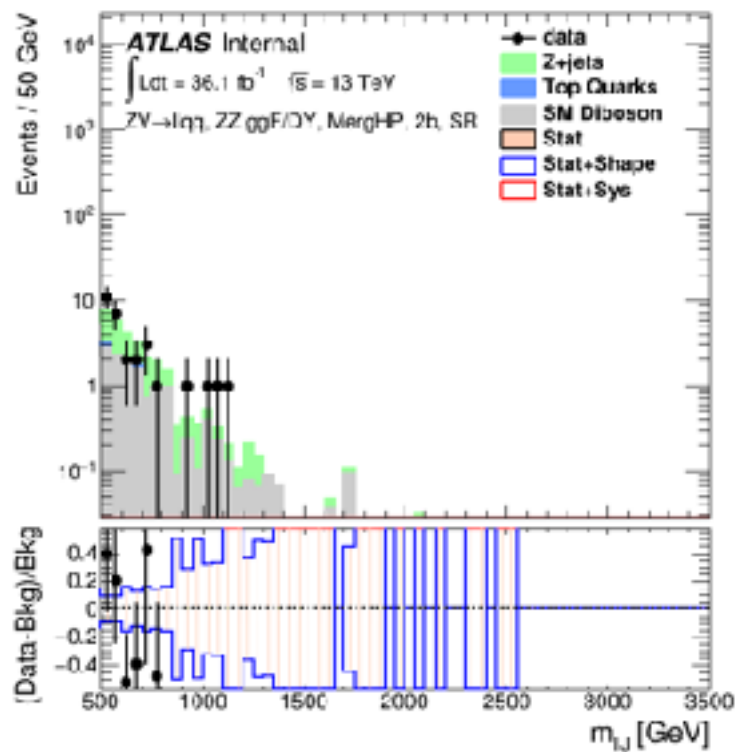


MergLP_VBF_ZZ_ZCR_X_boosted_m

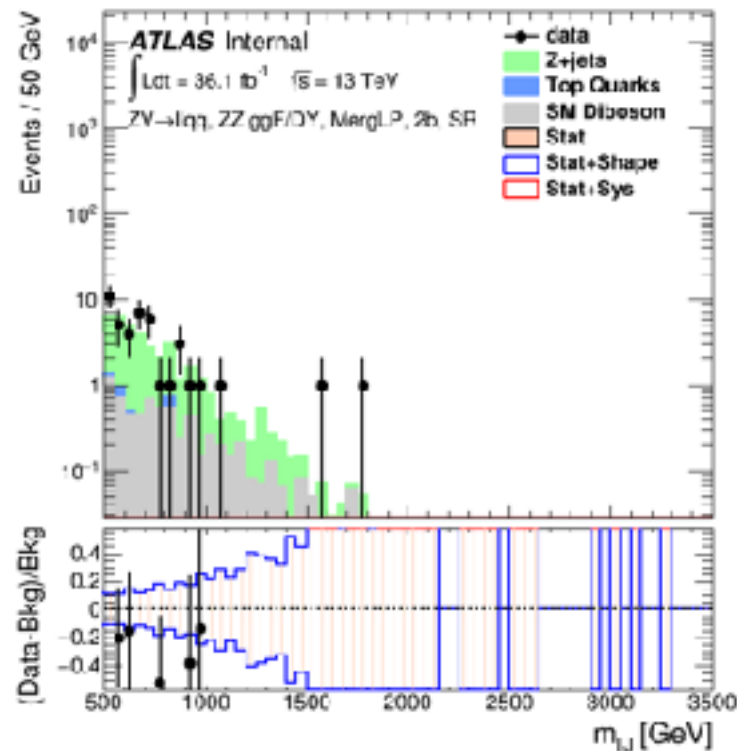


Res_VBF_ZZ_SR_X_resolved_WZ_m

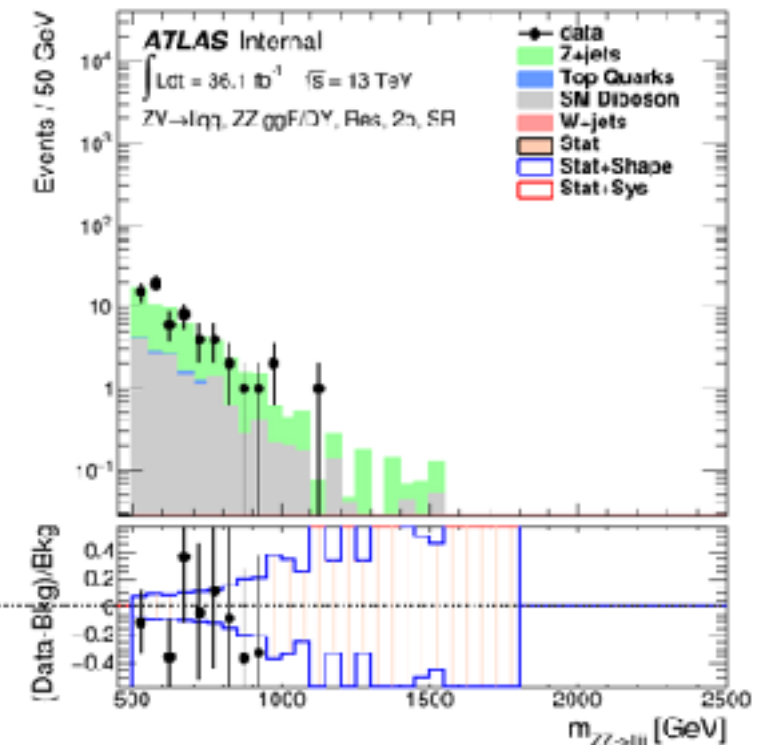
ZZ SIGNAL REGIONS



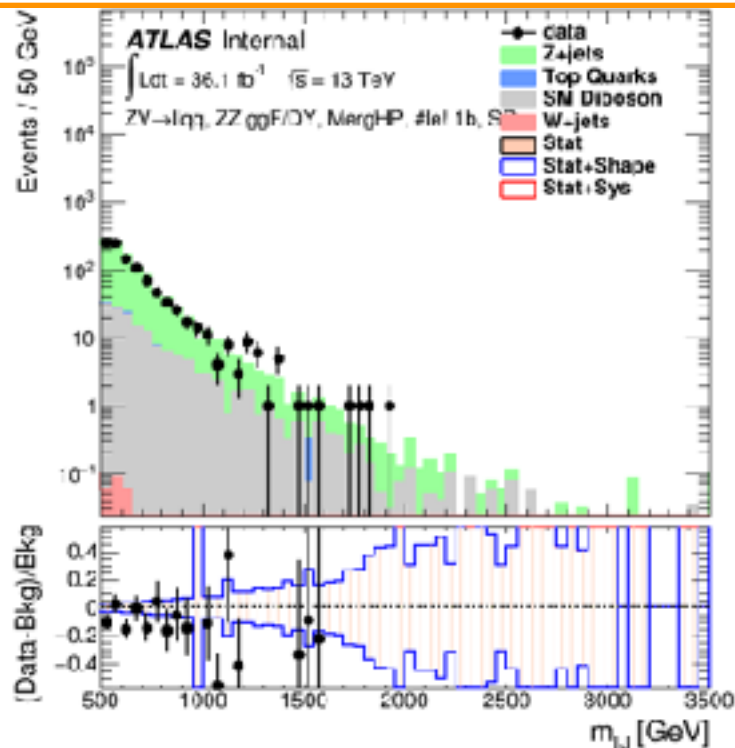
MergHP_GGF_ZZ_Tag_SR_X_boosted_m



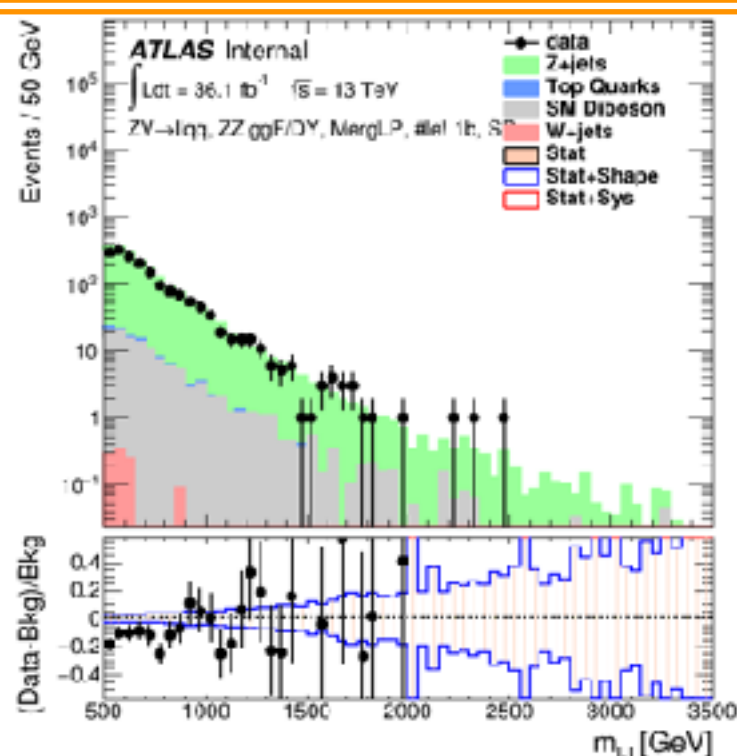
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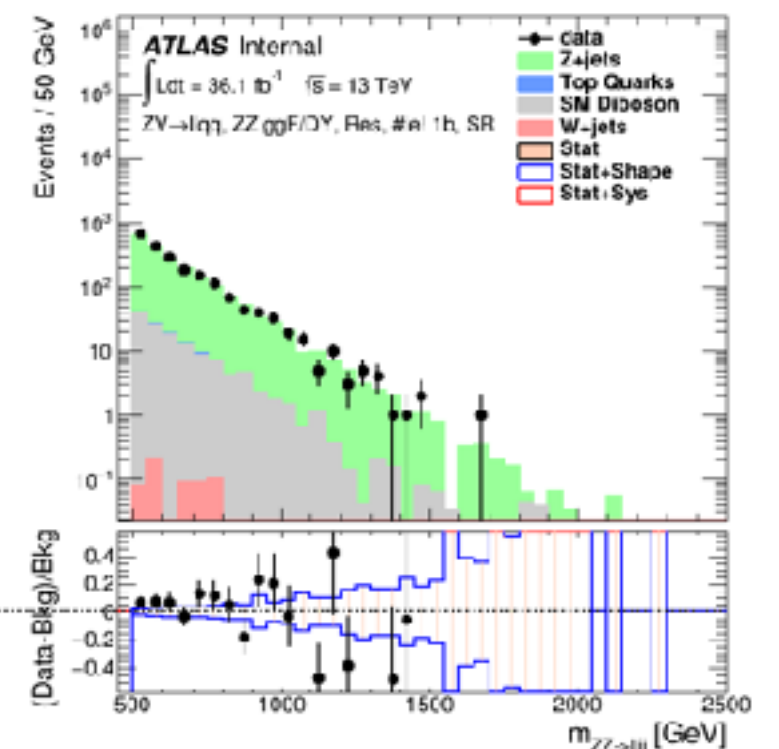
Res_GGF_ZZ_Tag_SR_X_resolved_WZ_m



MergHP_GGF_ZZ_Untag_SR_X_boosted_m

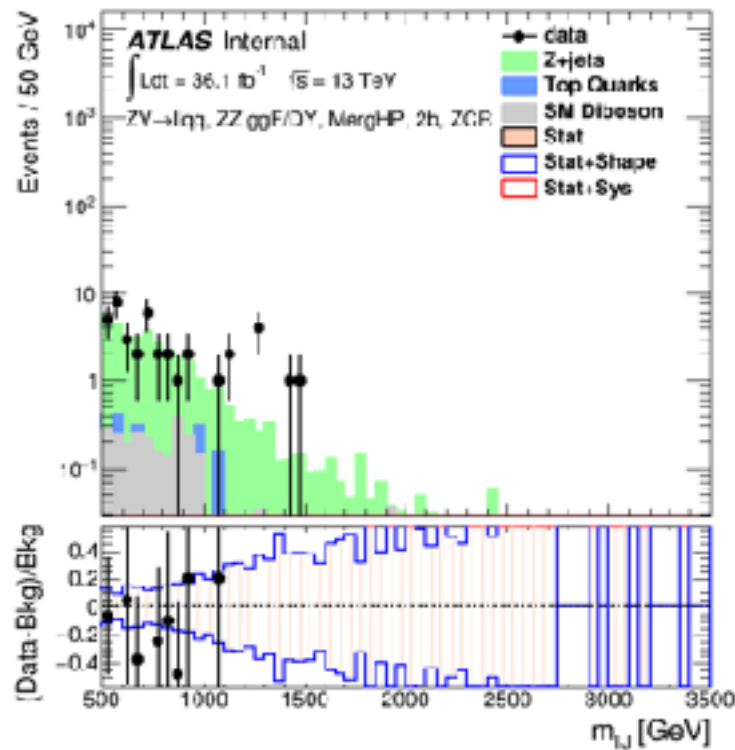


MergLP_GGF_ZZ_Untag_SR_X_boosted_m

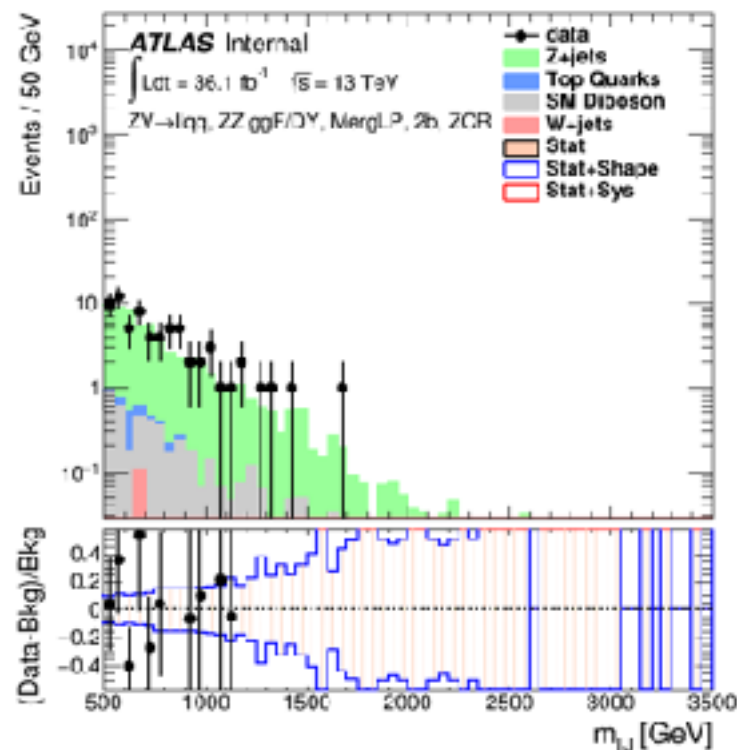


Res_GGF_ZZ_Untag_SR_X_resolved_WZ_m

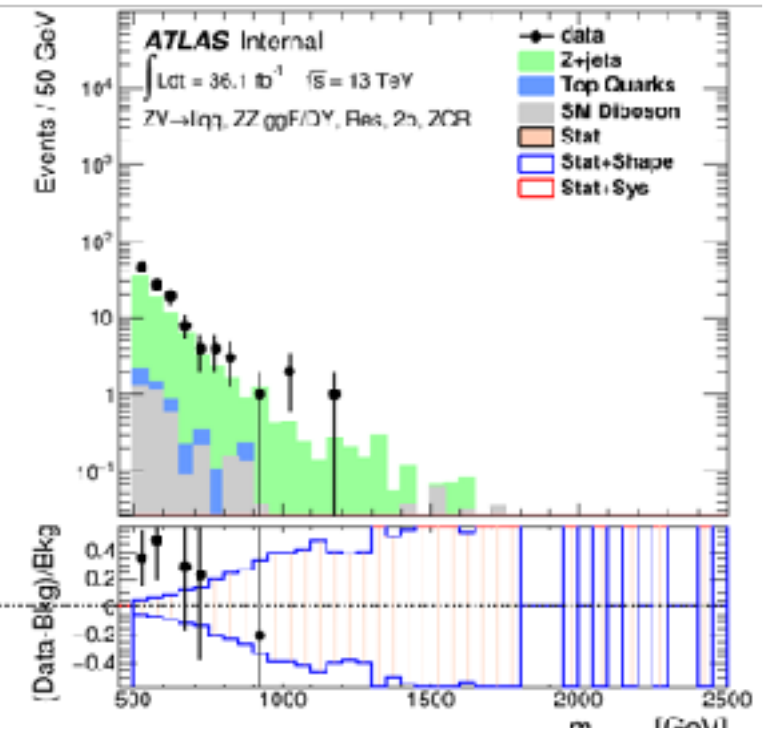
ZZ ZCONTROL REGIONS



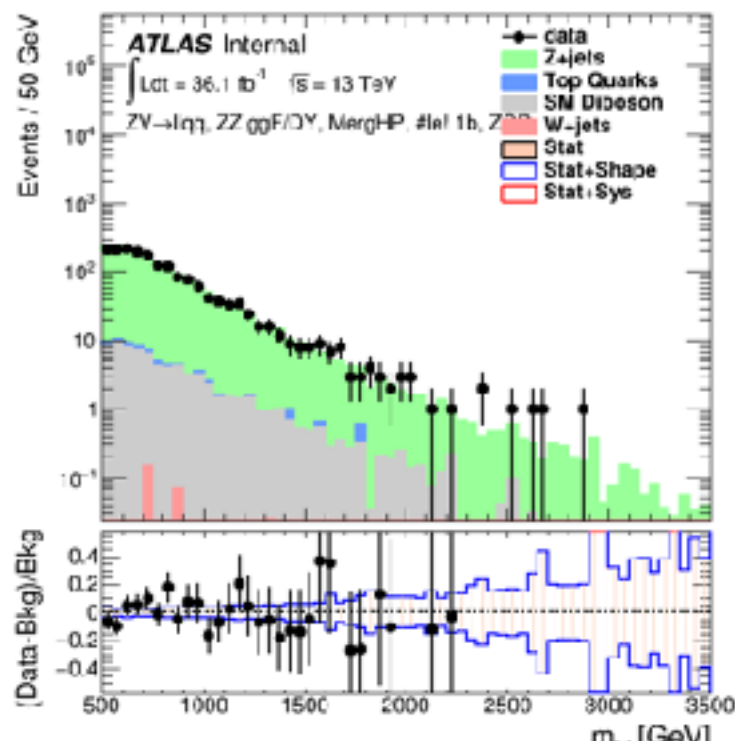
MergHP_GGF_ZZ_Tag_ZCR_X_boosted_m



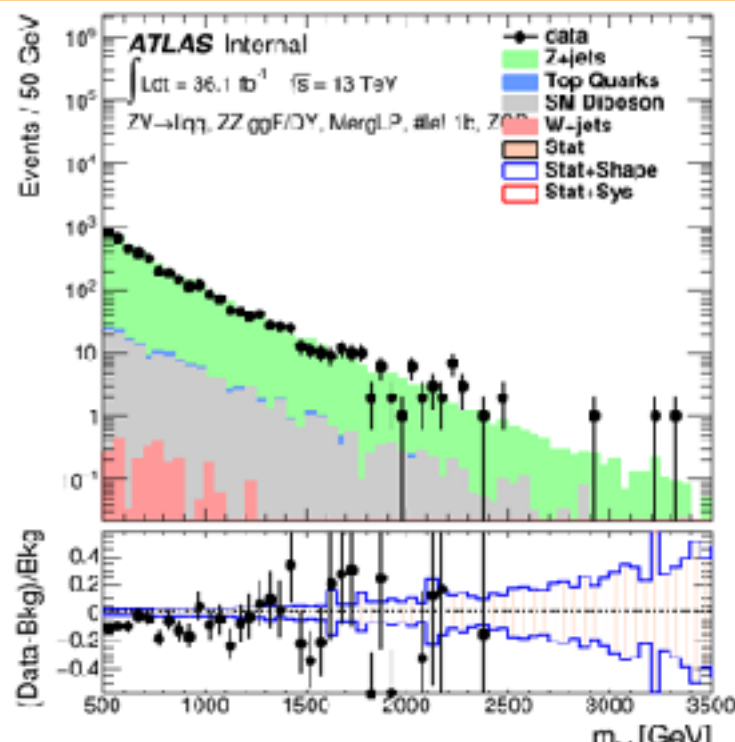
MergLP_GGF_ZZ_Tag_ZCR_X_boosted_m



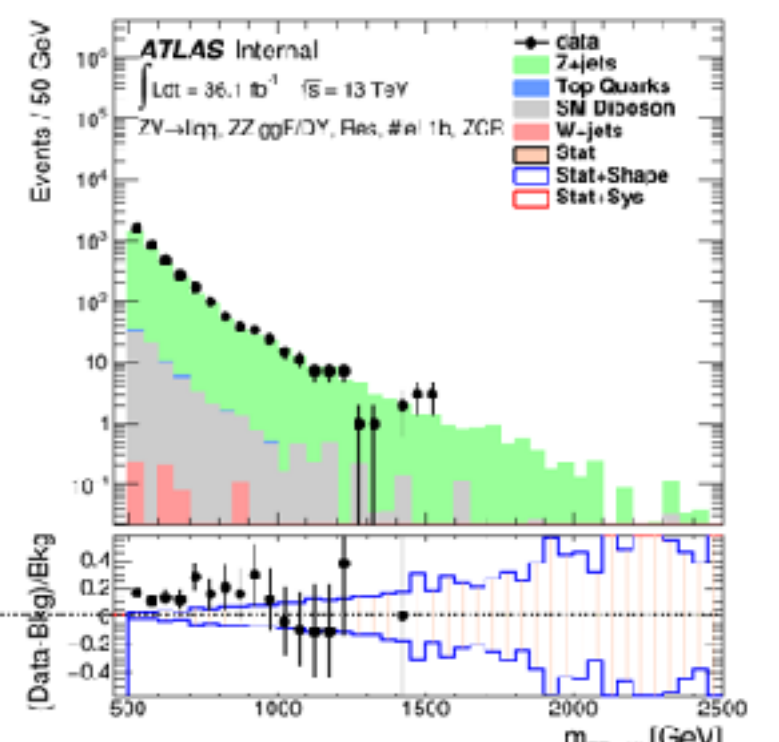
Res_GGF_ZZ_Tag_ZCR_X_resolved_WZ_m



MergHP_GGF_ZZ_Untag_ZCR_X_boosted_m

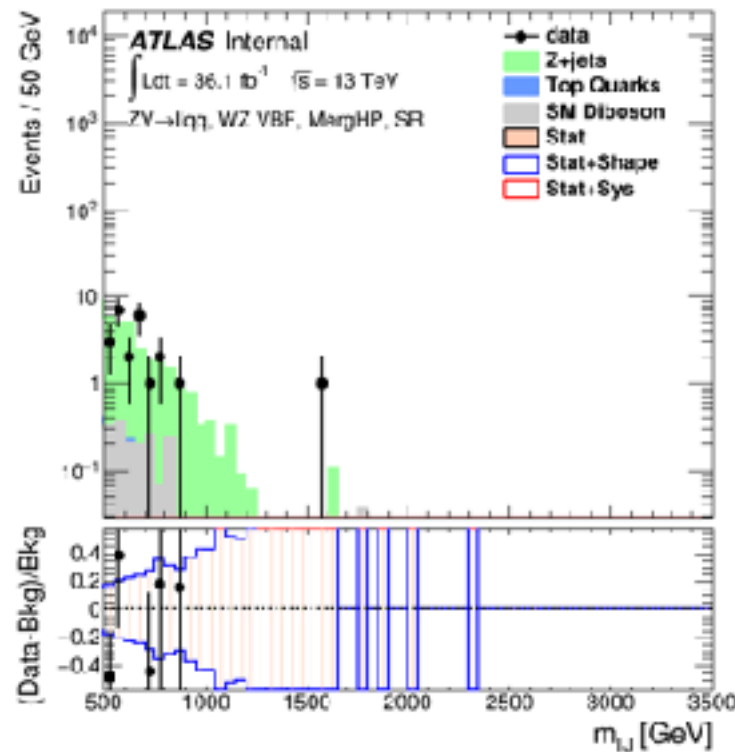


MergLP_GGF_ZZ_Untag_ZCR_X_boosted_m

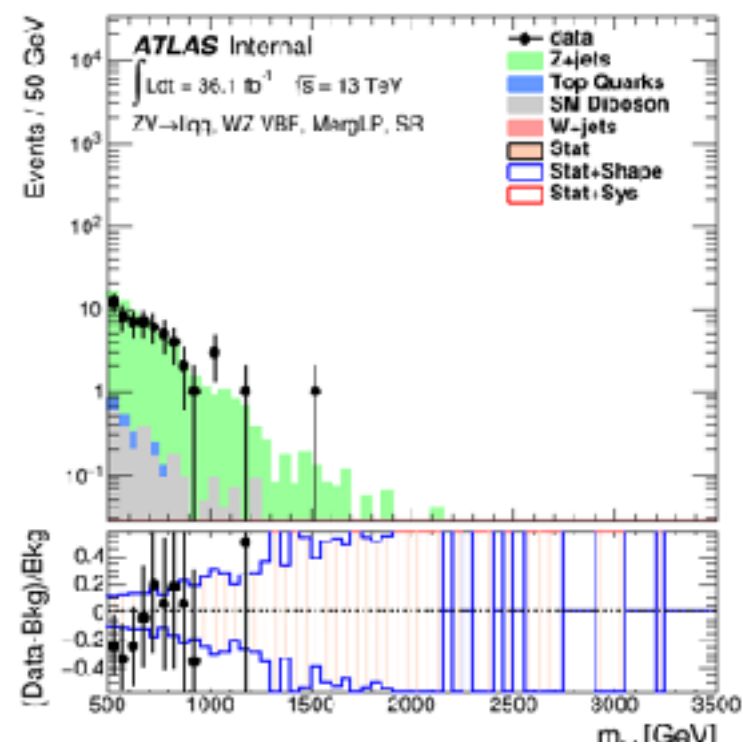


Res_GGF_ZZ_Untag_ZCR_X_resolved_WZ_m

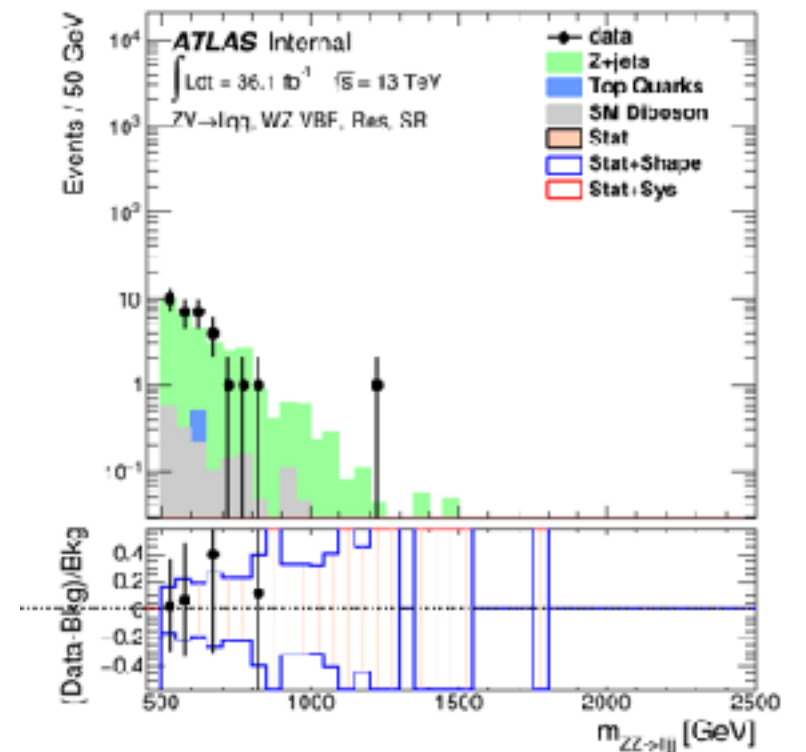
WZ SIGNAL REGIONS



MergHP_VBF_ZW_SR_X_boosted_m

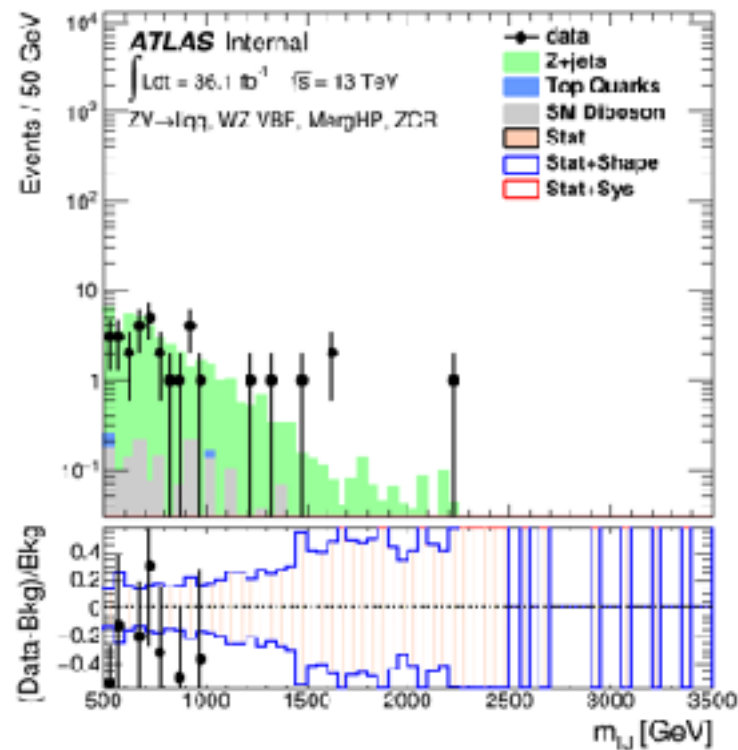


MergLP_VBF_ZW_SR_X_boosted_m

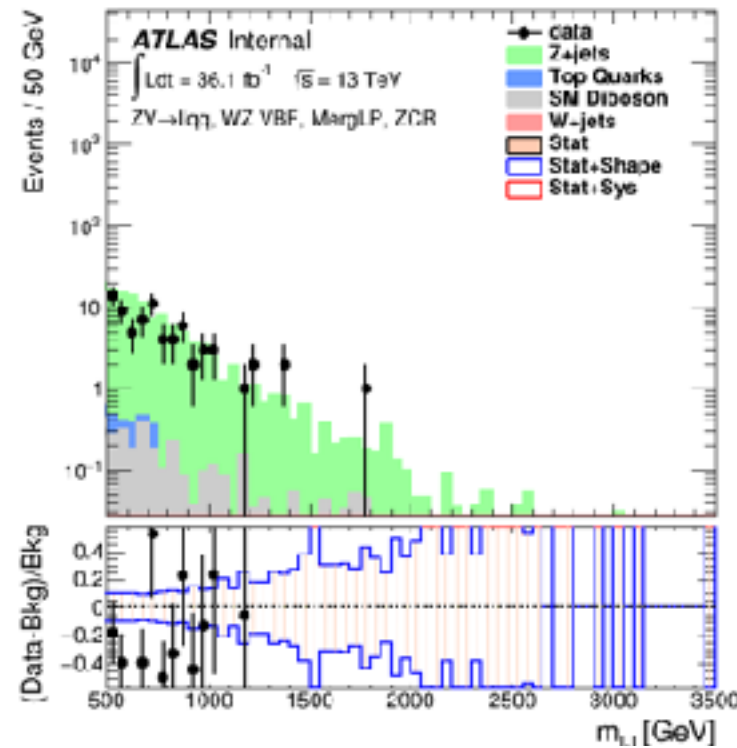


Res_VBF_ZW_SR_X_resolved_WZ_m

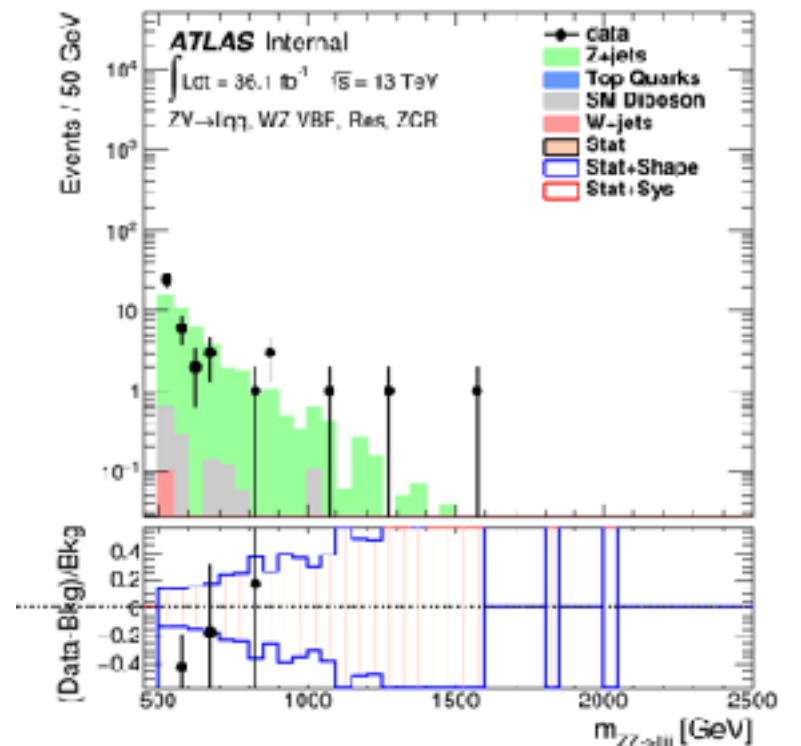
WZ Z CONTROL REGIONS



MergHP_VBF_ZW_ZCR_X_boosted_m

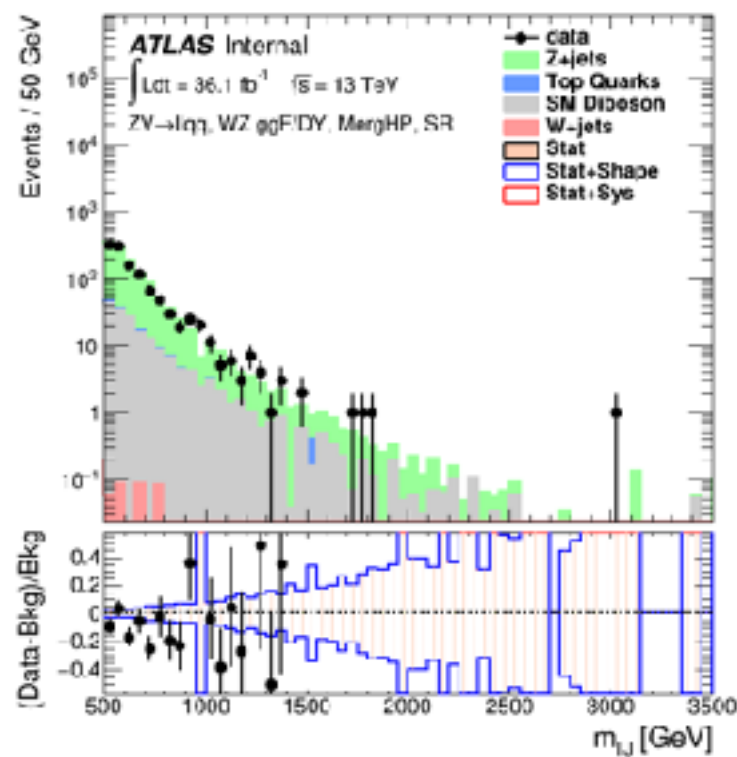


MergLP_VBF_ZW_ZCR_X_boosted_m

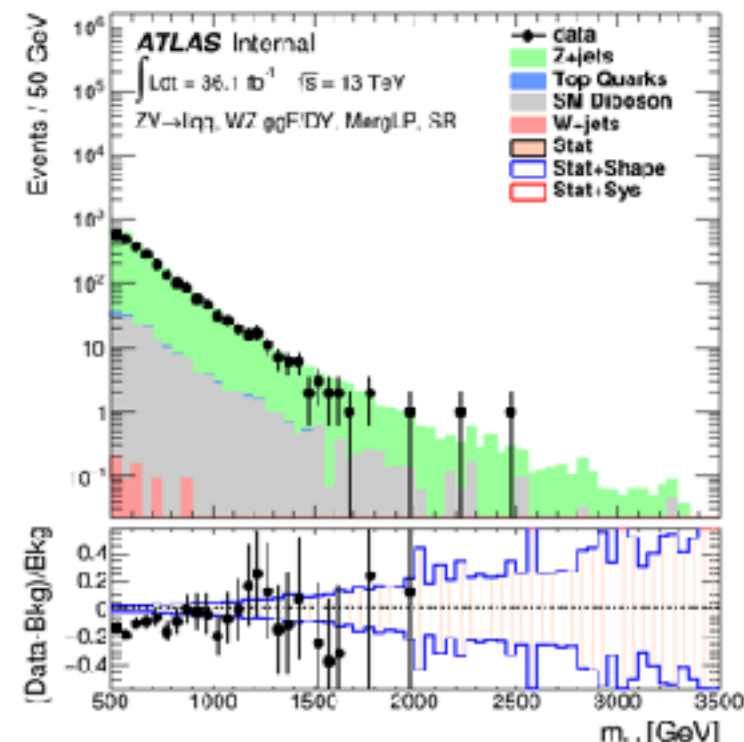


Res_VBF_ZW_ZCR_X_resolved_WZ_m

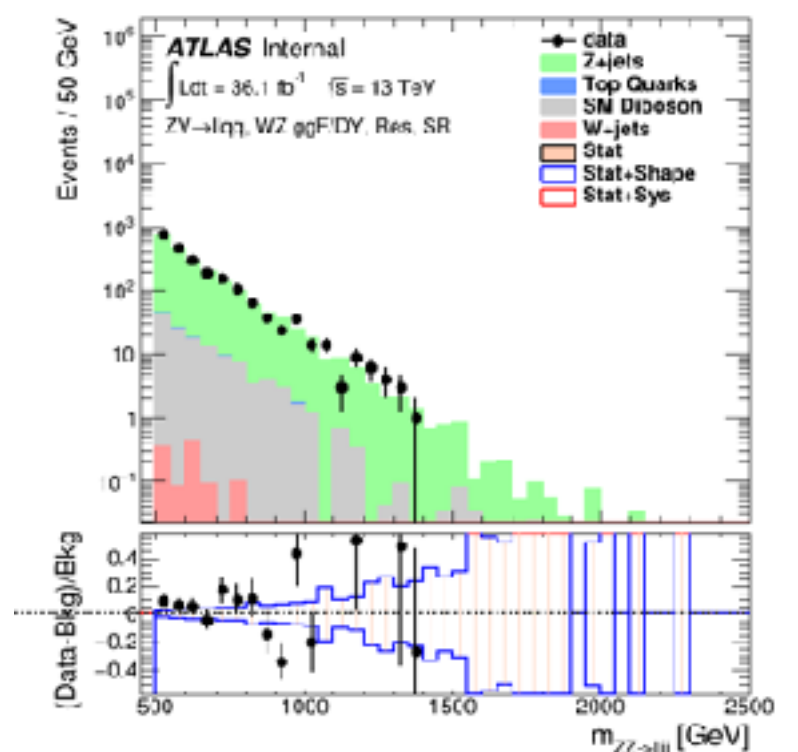
WZ SIGNAL REGIONS



MergHP_GGF_ZW_SR_X_boosted_m

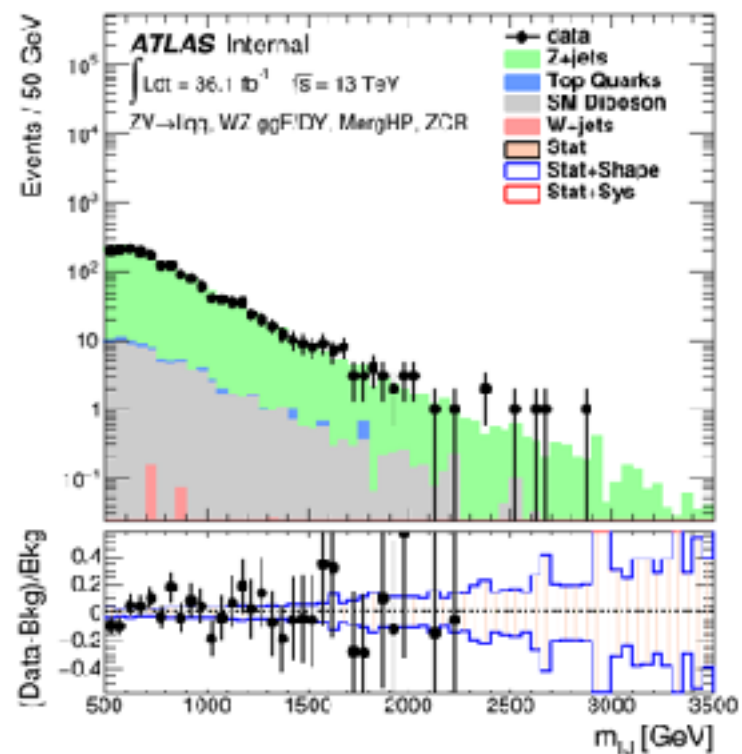


MergLP_GGF_ZW_SR_X_boosted_m

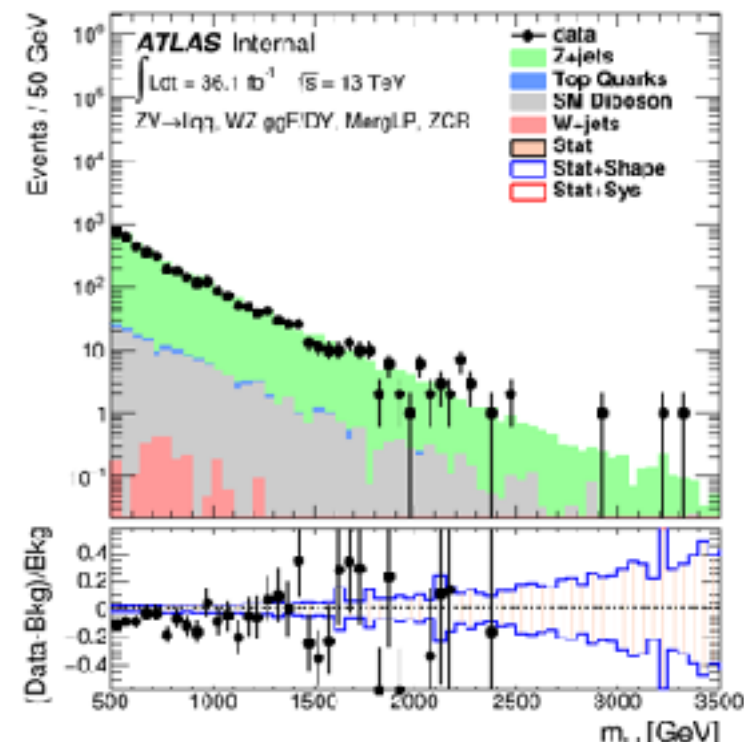


Res_GGF_ZW_SR_X_resolved_WZ_m

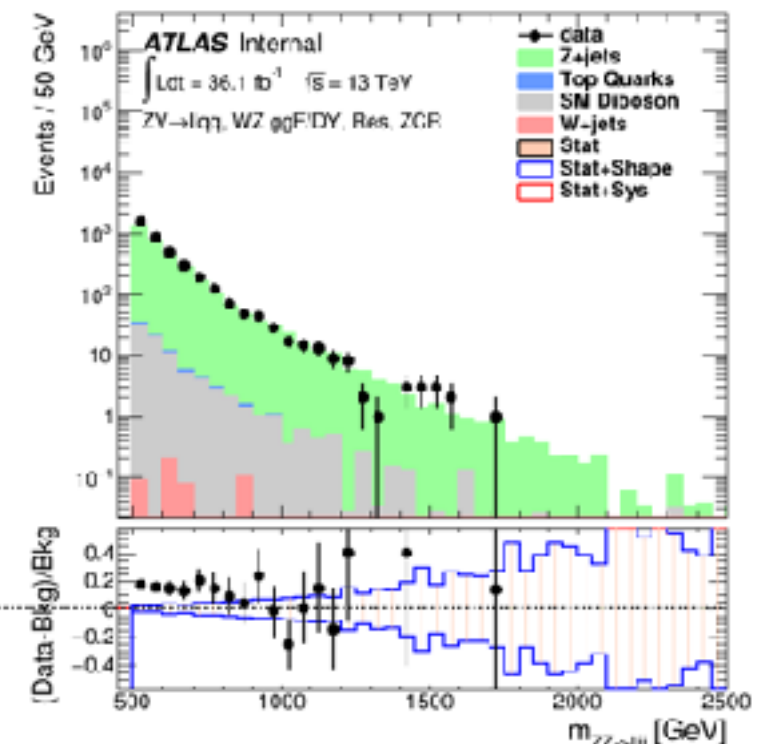
WZ ZCR CONTROL REGIONS



MergHP_GGF_ZW_ZCR_X_boosted_m



MergLP_GGF_ZW_ZCR_X_boosted_m

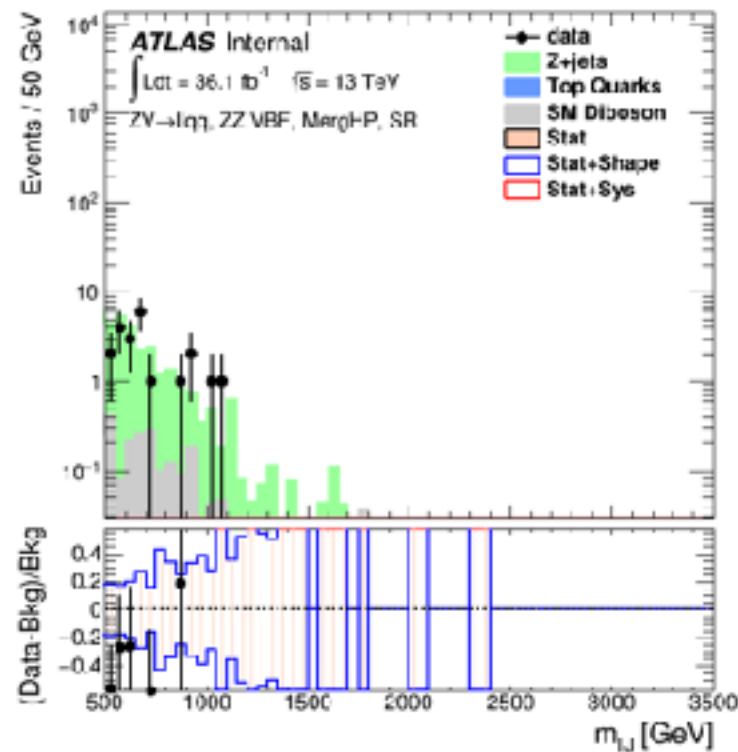


Res_GGF_ZW_ZCR_X_resolved_WZ_m

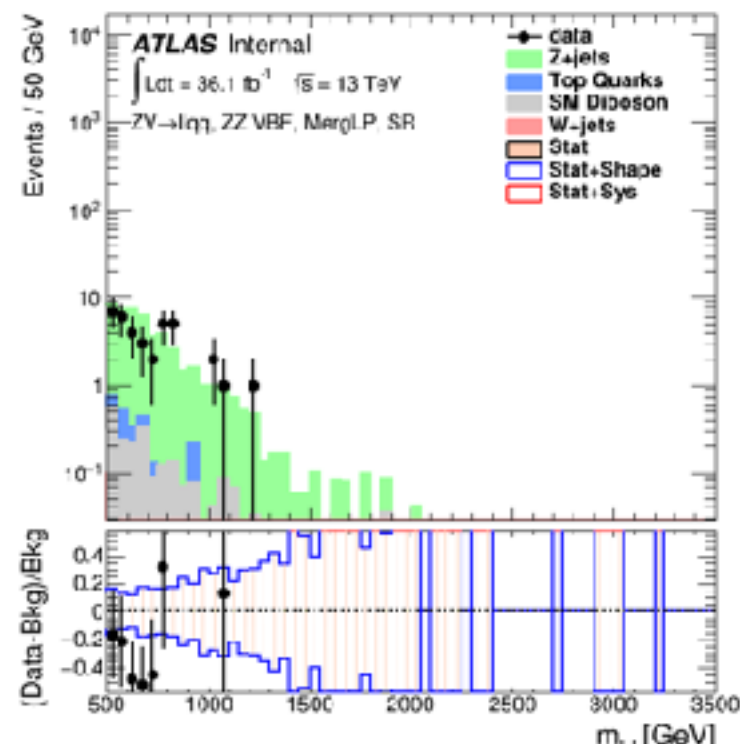
SUMMARY - DISTRIBUZIONI DA ISTOGRAMMI

- Il mio codice: sotto [/afs/le.infn.it/user/s/spagnolo/atlas/Physics/DBLexot/CxAODReader2021](#)
 - Per fare i plot dati vs MC
 - In CxAODReader_VVSemileptonic/CxAODReader_VVSemileptonic/macros/
 - Root **runCxAODPlots_Syst.cxx** (su /eos/user/c/chiodini/CONDOR_output/ZV2Lep_TCC_EMTopo_Nopass/fetch/all.root)
 - Che usa makePlots2Lepton_Syst_GC.cxx (copia di **makePlots2Lepton_Syst.cxx** con alcuni specifici istogrammi selezionati)
 - Tutti i plot da Gabriele delle ***m_4f per le SR e ZCR*** in [/afs/le.infn.it/user/s/spagnolo/atlas/Physics/DBLexot/CxAODReader2021/CxAODReader_VVSemileptonic/CxAODReader_VVSemileptonic/macros/2L-PROVAAll-GC-HISTOS](#)

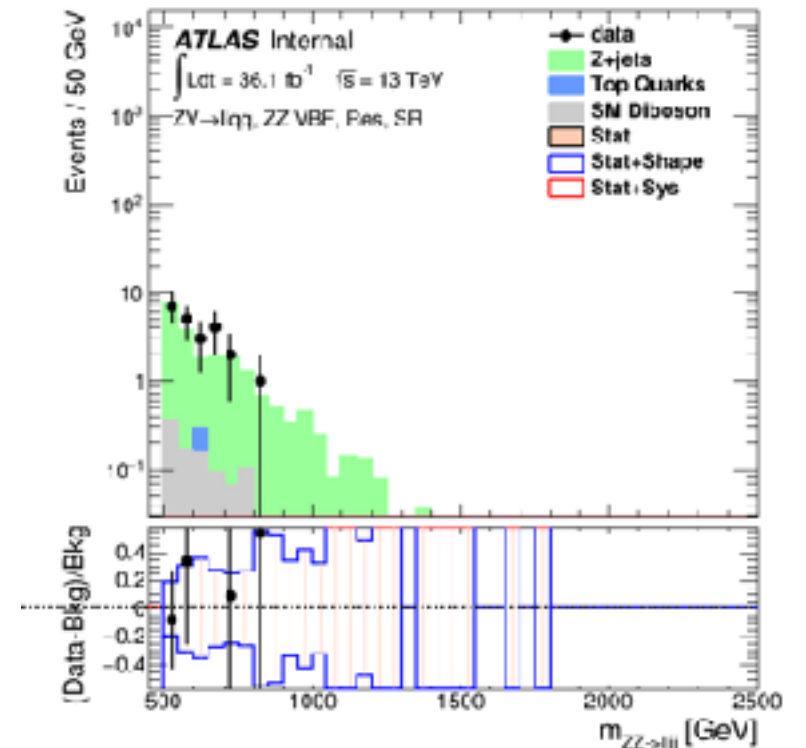
ZZ SIGNAL REGIONS



MergHP_VBF_ZZ_SR_X_boosted_m



MergLP_VBF_ZZ_SR_X_boosted_m



Res_VBF_ZZ_SR_X_resolved_WZ_m

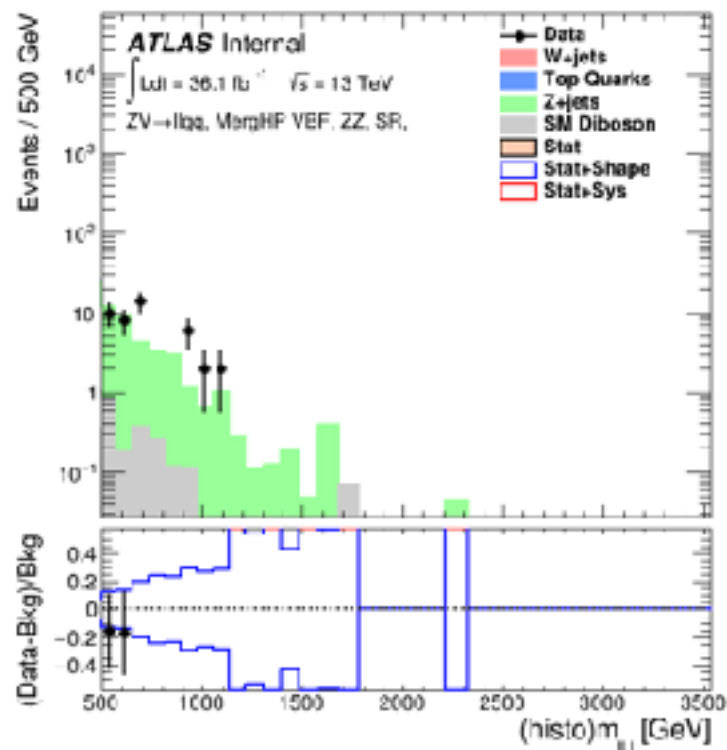
summaryMSCprova_1/yield_Nominal_Pass_Res_VBF_ZZ_SR.txt

sampleName	entries	integral	error	error/integ.
Zjet	2734	181.473	9.0304	0.0497617
stop	5	1.16518	0.539544	0.463055
ttbar	131	8.21078	0.884217	0.10769
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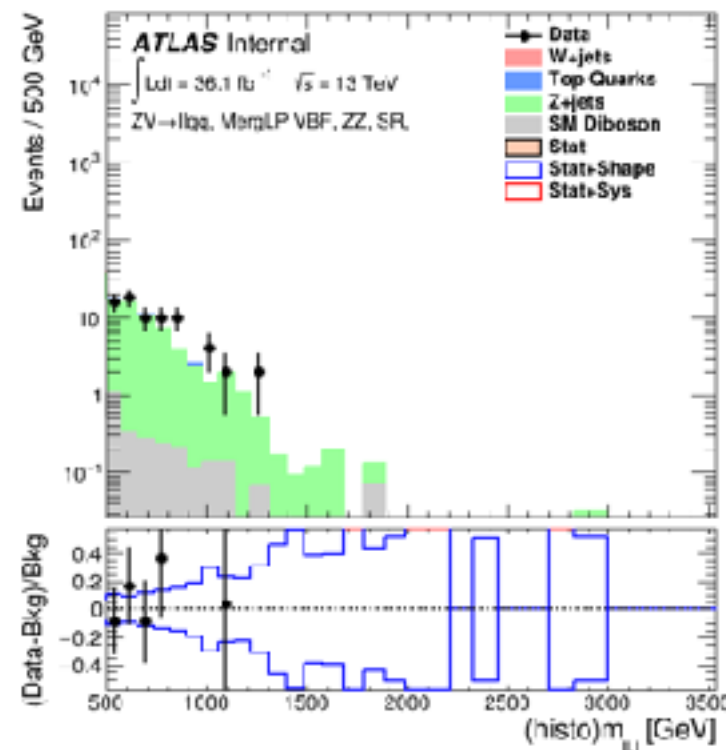
ZZ SIGNAL REGIONS

From histos

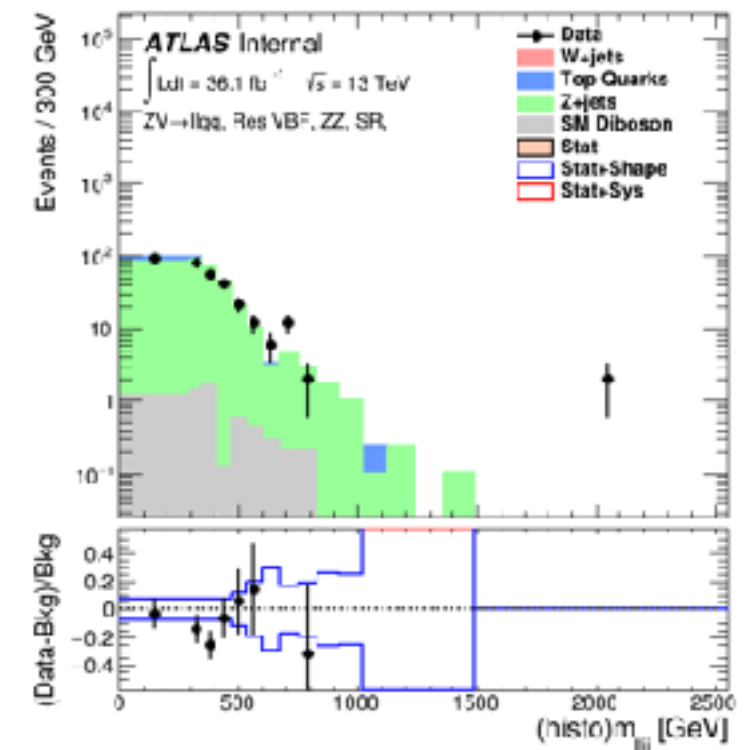
DIFFERENT BINNING !!!!



MergHP_VBF_ZZ_SR_X_boosted_m



MergLP_VBF_ZZ_SR_X_boosted_m



Res_VBF_ZZ_SR_X_resolved_WZ_m

2L-PROVAAll-GC-HISTOS/yield_2tag2pjet_0ptv_Res_VBF_ZZ_SR

sampleName	entries	integral	error	error/integ.
W	0	0	0	0
stopWt	6	1.40812	0.580125	0.411984
stopt	2	0.638282	0.451334	0.707107
stops	0	0	0	0
ttbar	262	16.3602	1.24397	0.0760364
Z	4542	332.172	12.6361	0.0380409
ZZ	0	0	0	0
WZ	210	6.12552	0.593041	0.0968148
WW	0	0	0	0
bkg:	5022	356.704		
data	330	330		

E comunque yield finale inconsistente !

Di nuovo un fattore 2