
OUTLINE

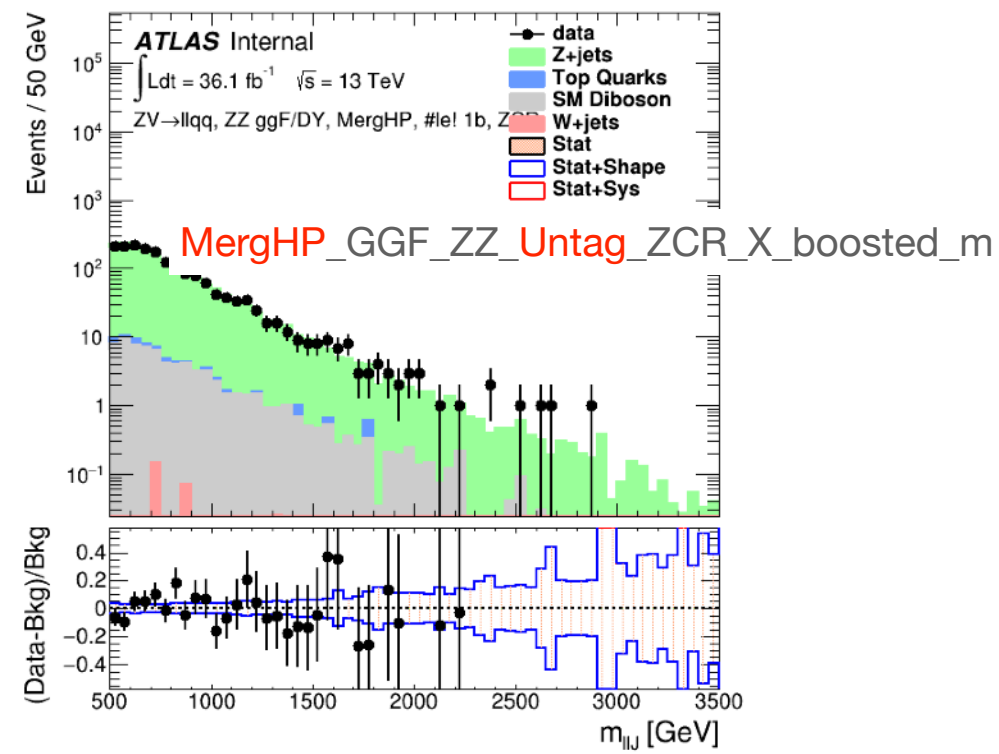
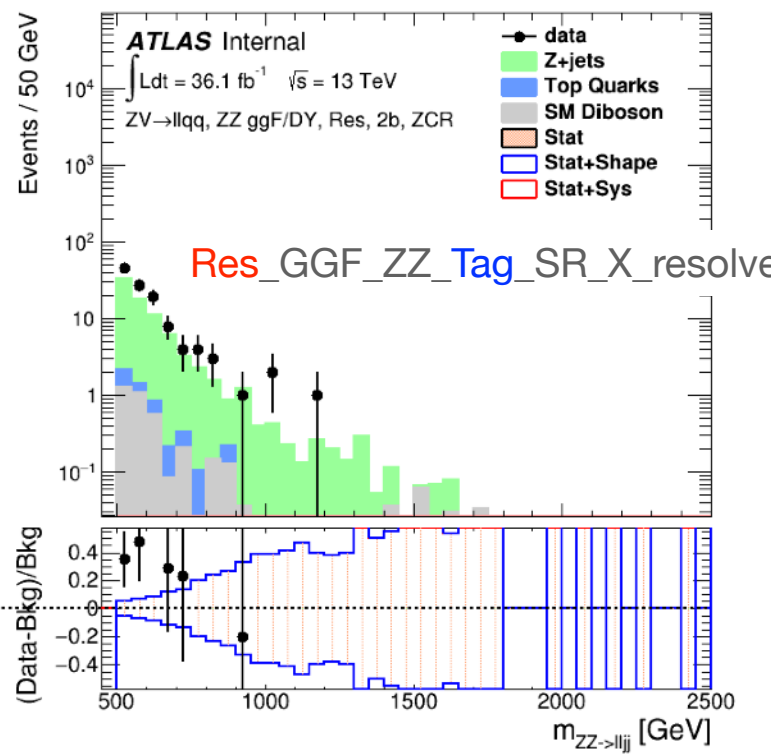
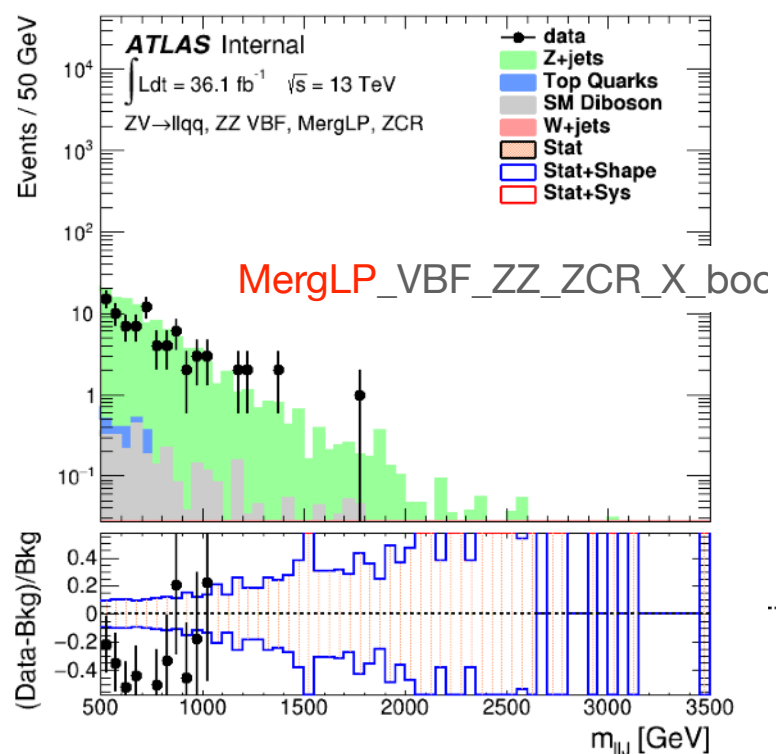
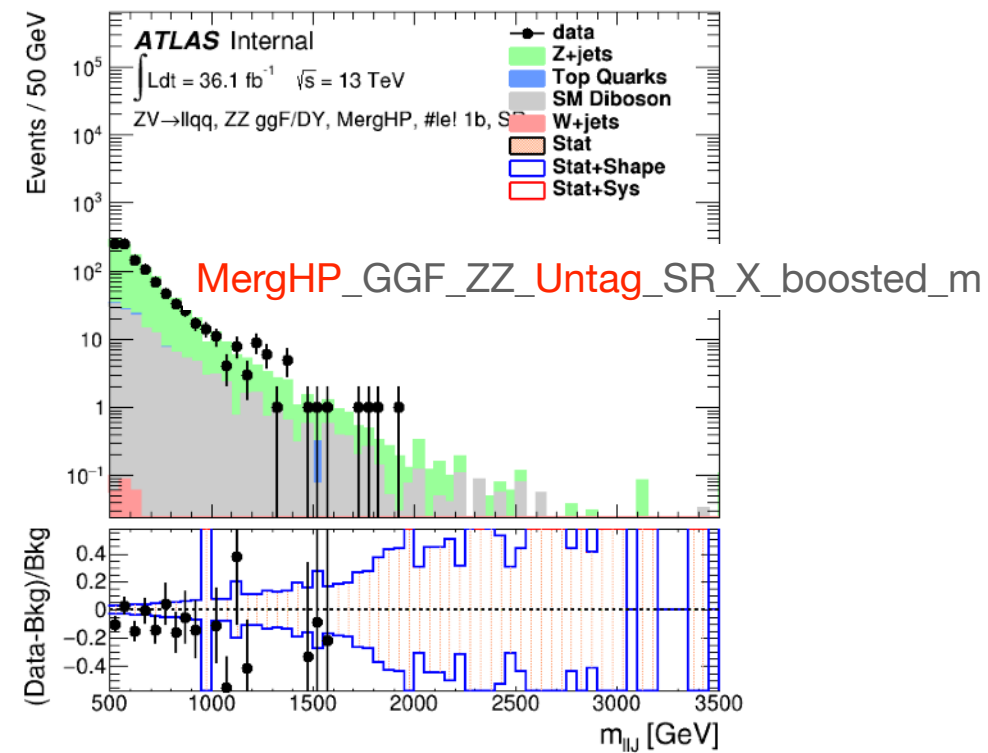
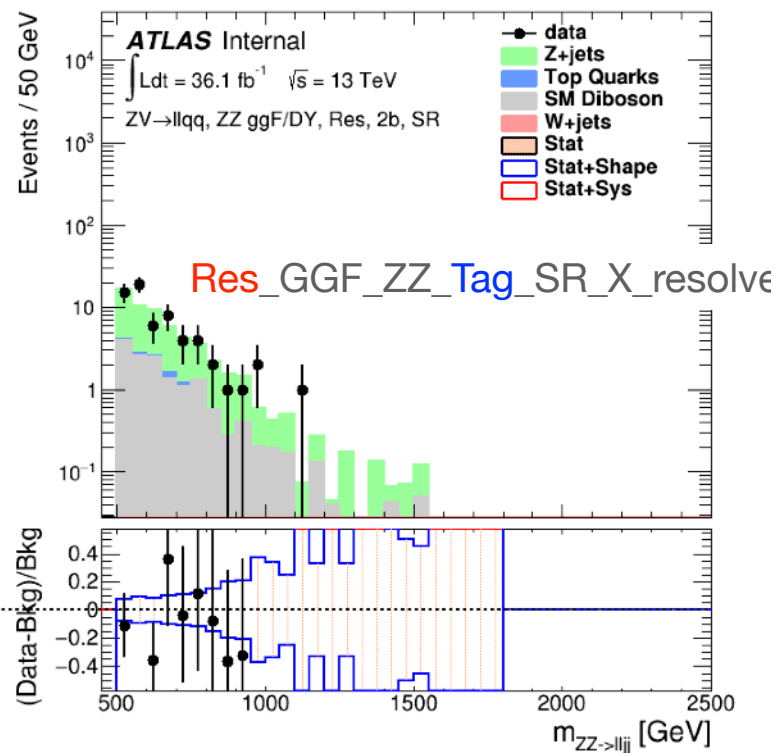
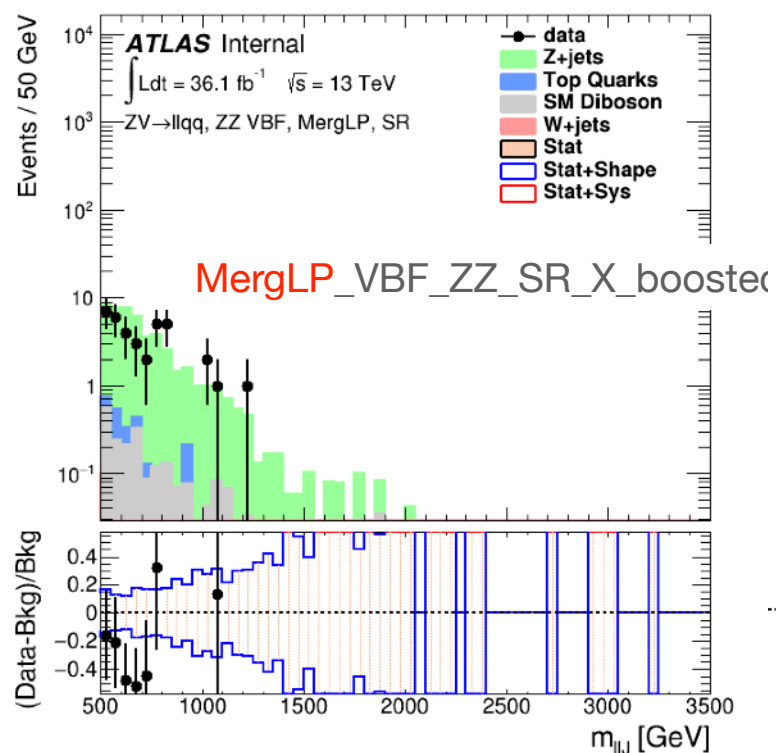
- Exercising the Reader for the 2L channel
 - nominal (latest publication) selection
 - a first look at trees
- Jet variables modeling for three jet collection variants
 - check data / MC in the Reader output before applying W/Z tagging cuts
 - Ongoing ... no updates today
- (p)DNN code adapted to the current Reader version
 - first functionality tests
- Next steps

RUNNING THE READER FOR THE 2L CHANNEL

- Current master version run on SM background processes, signal and data (2015-2016) for all jet collections, TCC_EMTopo, LCTopo_EMTopo, and UFO_PFlow (v33-08)
- For TCC_EMTopo, **distributions of m_{ll} or m_{lljj}** for signal and Z control regions obtained **from the trees**:
 - ZZ signal regions and Z+jets control regions:
 - 3 in VBF (MergHP, MergLP, Res)
 - 6 in ggF/DY: (MergHP, MergLP, Res) x (Tag, Untag)
 - ZW signal and Z+jets control regions
 - 3 in VBF: (MergHP, MergLP, Res)
 - 3 in ggF/DY: (MergHP, MergLP, Res)
- easytreeplotter (tree to histograms with root data-frames manipulation):
 - Following instructions in https://gitlab.cern.ch/CxAODFramework/CxAODReader_VVSemileptonic/-/wikis/Plotting%20Tools - thanks to Rob. L.
- plotting macros of CxAODReader_VVSemileptonic

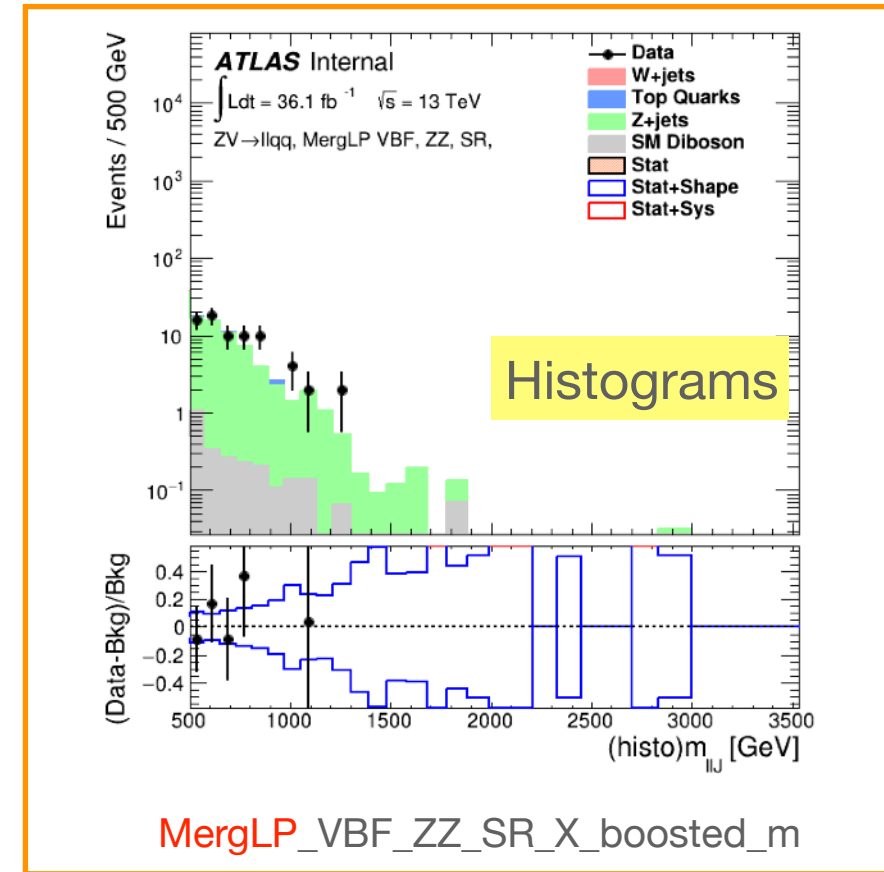
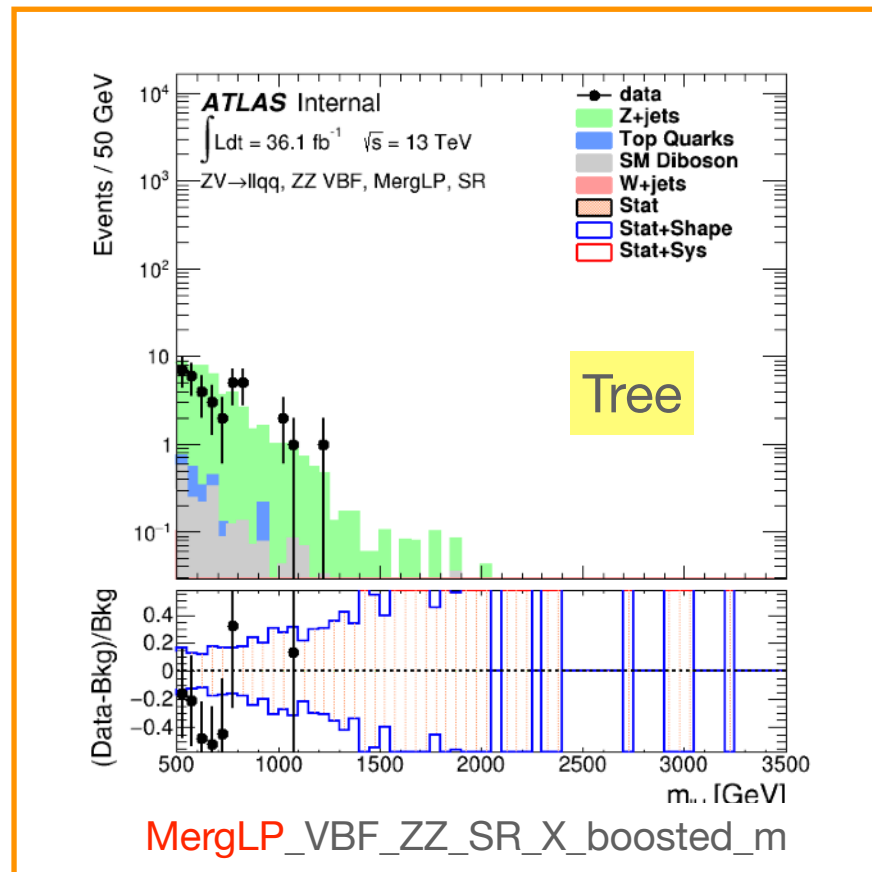
RUNNING THE READER FOR THE 2L CHANNEL

a sample of plots



RUNNING THE READER FOR THE 2L CHANNEL

comparing plots obtained from the trees with Reader output histograms



- yield in the output histograms is ~twice the yield from trees
 - bug in histogram filling code identified and fix provided, being delivered to the repository

RUNNING THE READER FOR THE 2L CHANNEL

- several checks still to be done but toolset successfully exercised
- bug in histogram filling code identified and fix provided, being delivered to the repository

- Alessandra's slides

NEXT STEPS

- Reader
 - Gain confidence in cut-flows and histograms + tree output
 - Scrutinize reader 2L analysis configuration
- DNN/pDNN
 - Proceed with validation and optimization
 - Understand in detail the performance
 - Consider a wider set of variables
- Interface DNN & Reader
 - Started looking at the lwttn
 - We are available/willing to work on updating the pDNNUpdates branch
 - Shall we ?
 - Anyone else interested in / undertaking this task ?