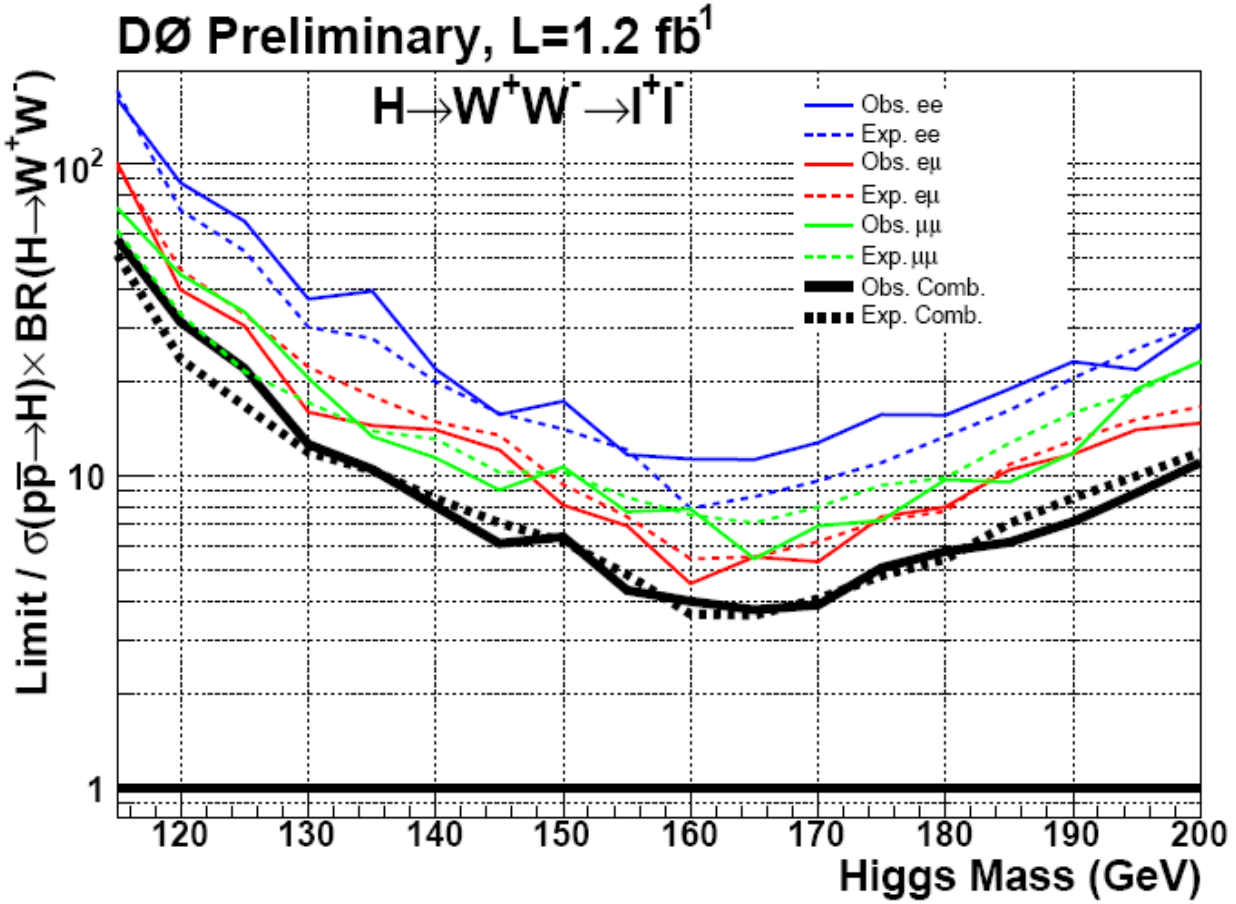
H->WW

Wrote conference note for ee,emu,mumu combined
In collaboration review since yesterday



D0 only
Run IIb only

Should be at
~1.4xSM @ 160 GeV
after comb. (2.3/fb)

Compare to 1.9xSM
for P5 last fall (1.7/fb)

(Sqrt(L)~1.6xSM)

Working on combination of p17+p20 and D0/CDF
Now aiming to be done for Moriond QCD

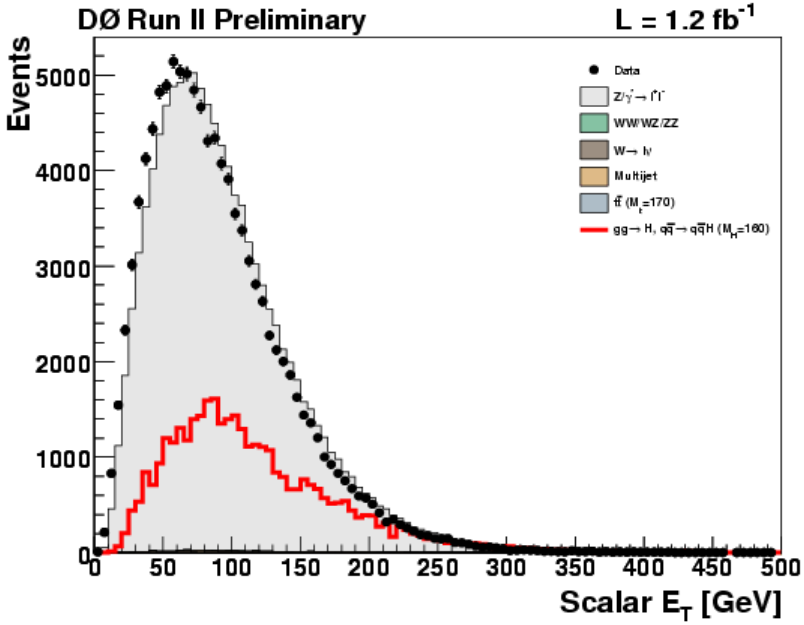
H->WW->mumu Systematics

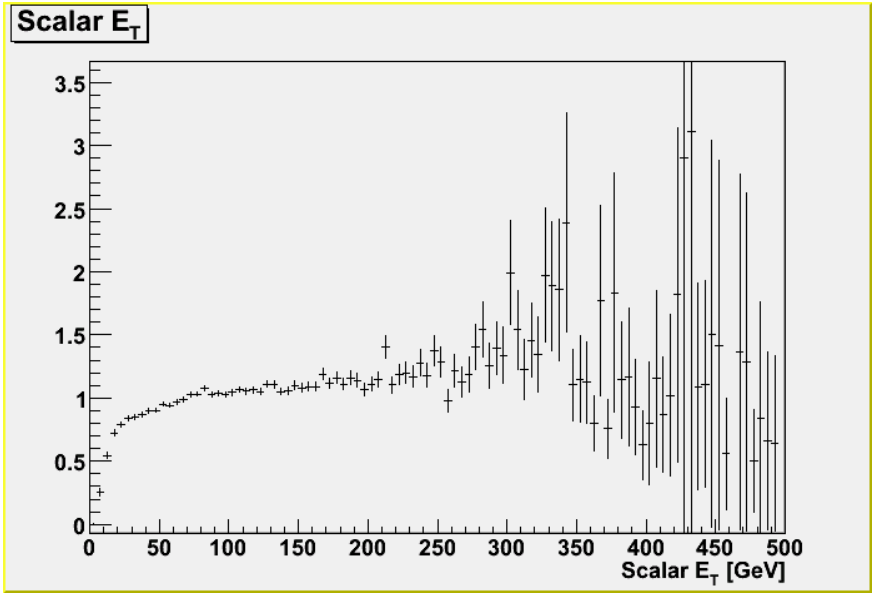
NN input variables are not modeled perfectly

1) Look at agreement in Z+jets data/MC at preselection level

   (We're looking at Scalar Et as an example here.)

2) Measure event reweighting function which brings MC to data





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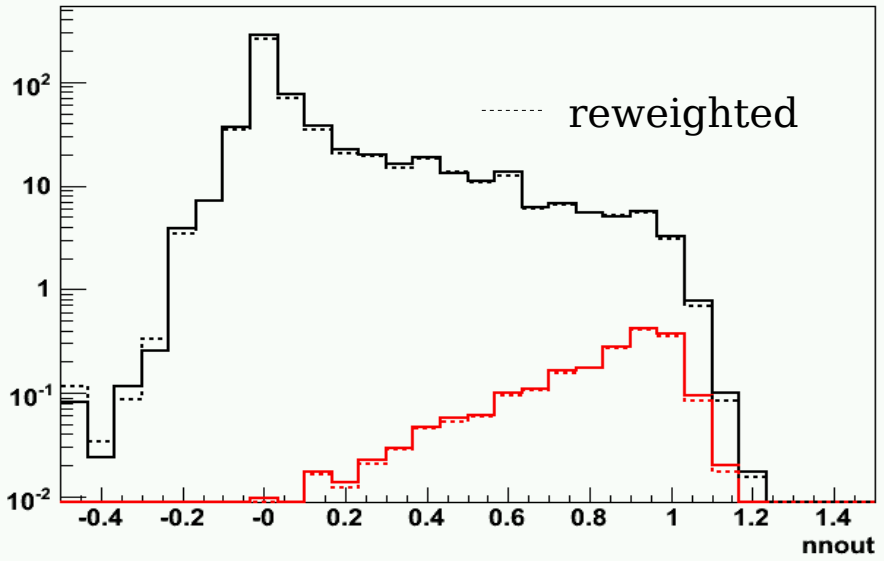
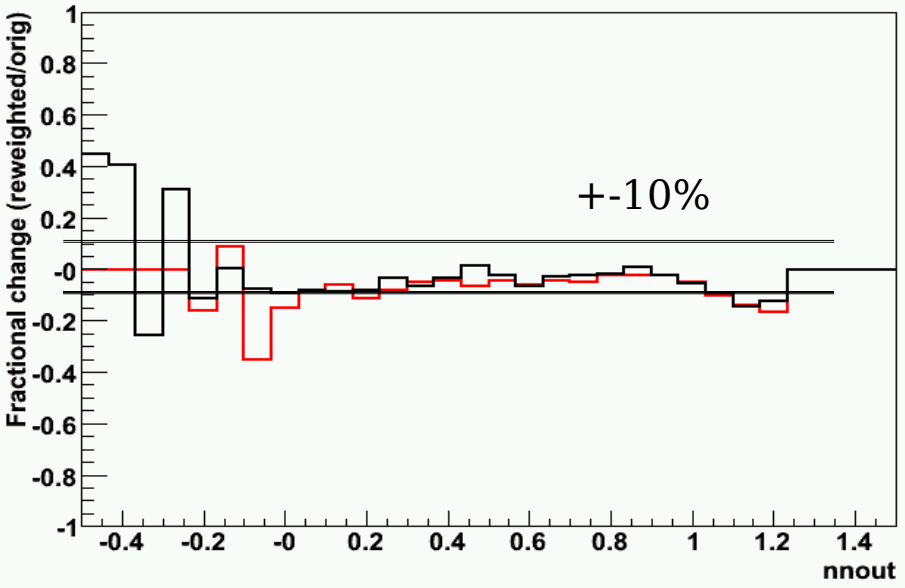
3) Run post-selection events through NN with/without reweighting events based on this variable



4) Divide to find the fractional change (vs. nn output) of the signal and background, caused by the reweighting of this variable



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5) Input these fractional differences as shape uncertainties for signal and background in COLLIE

- (waiting for results)

Future)

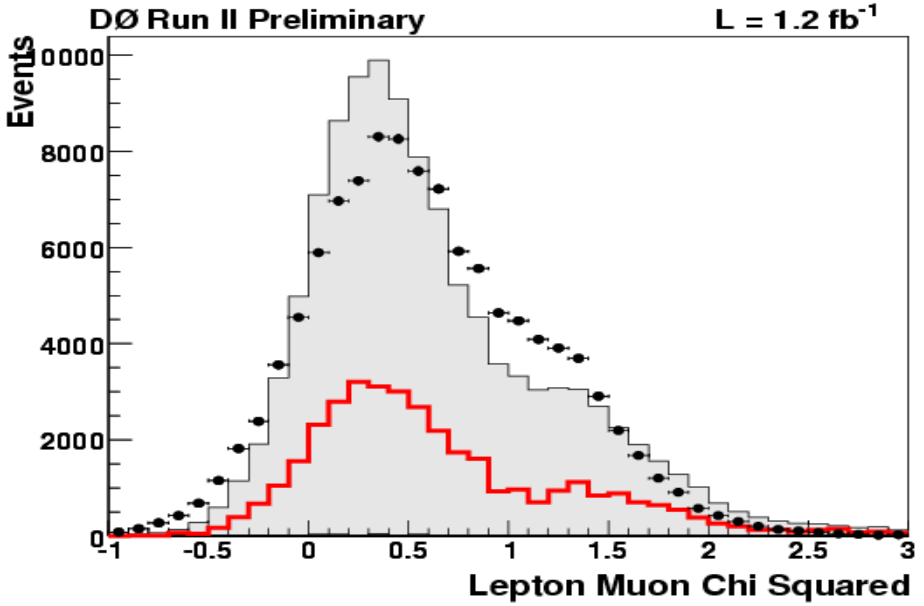
- Could consider reweighting variables *before* training NN
- Could then arguably reduce the systematic uncertainty?

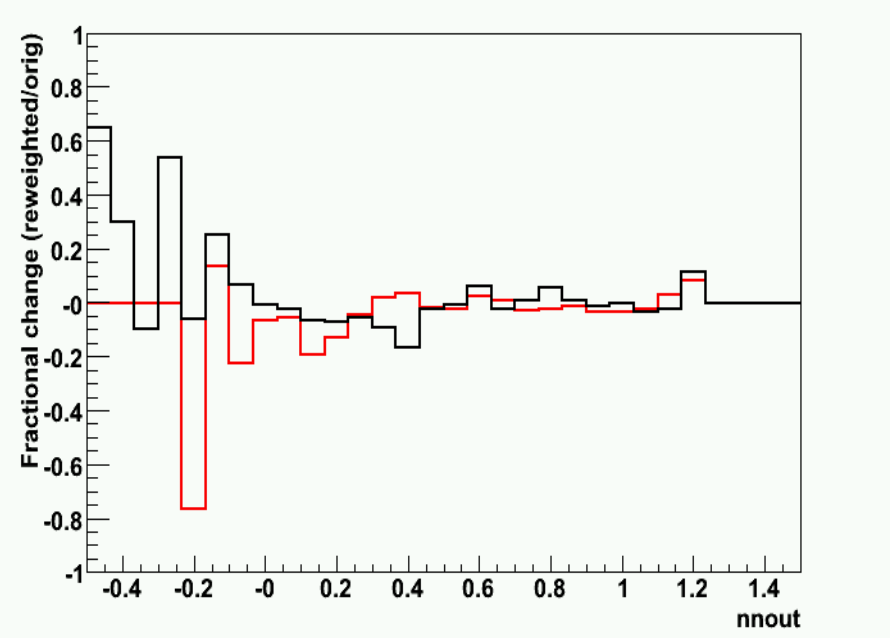
H->WW->mumu Systematics

More variables:

MaxMuonChiSq

- Doesn't agree too well at preselection
- But doesn't influence the NN output much





H->WW->mumu Systematics

MinMuonQuality

- Agrees ~OK at preselection
- Also doesn't influence the NN output much