



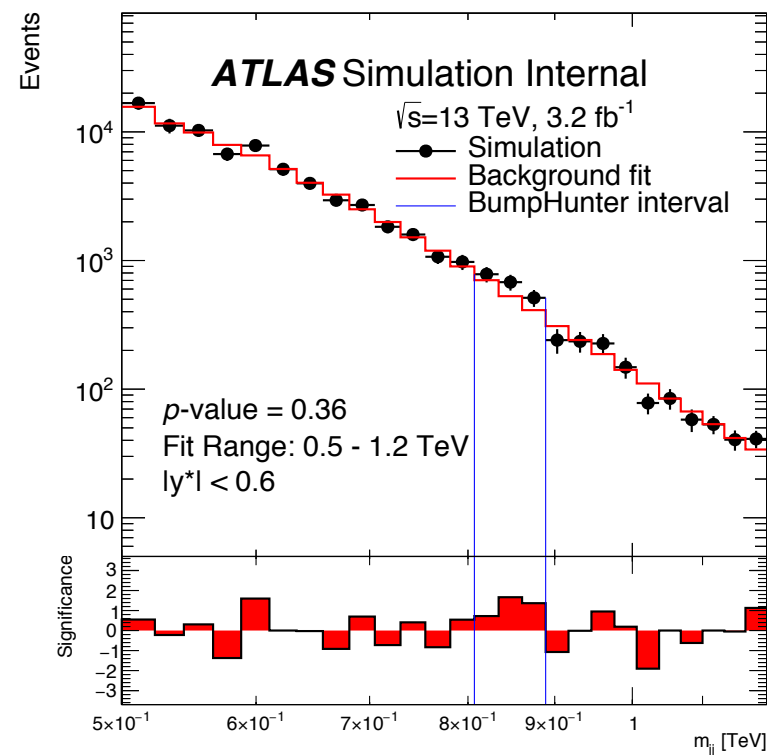
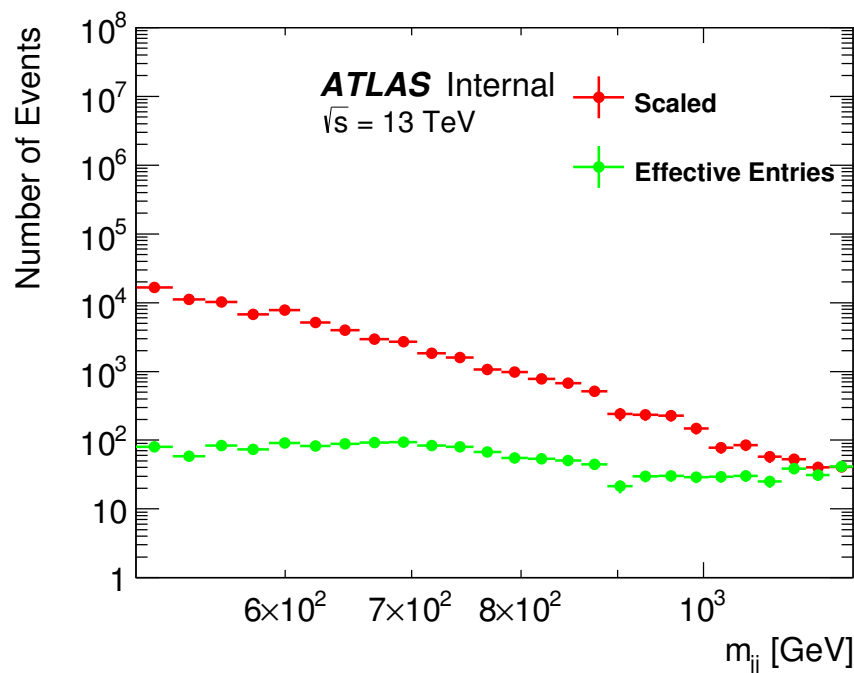
Spurious Signal Update

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11 May 2016

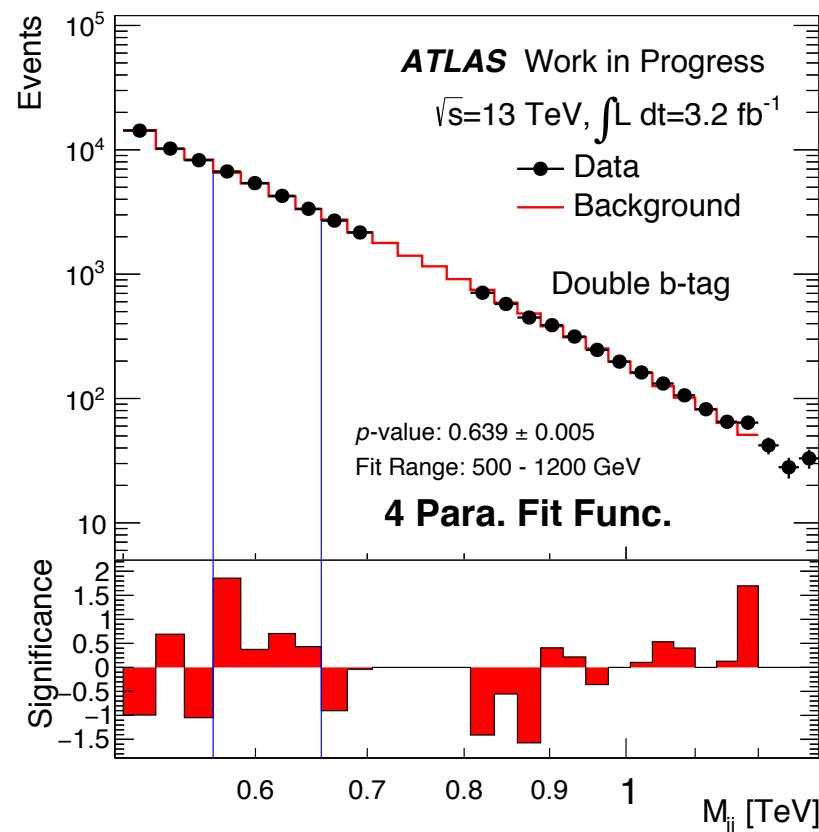
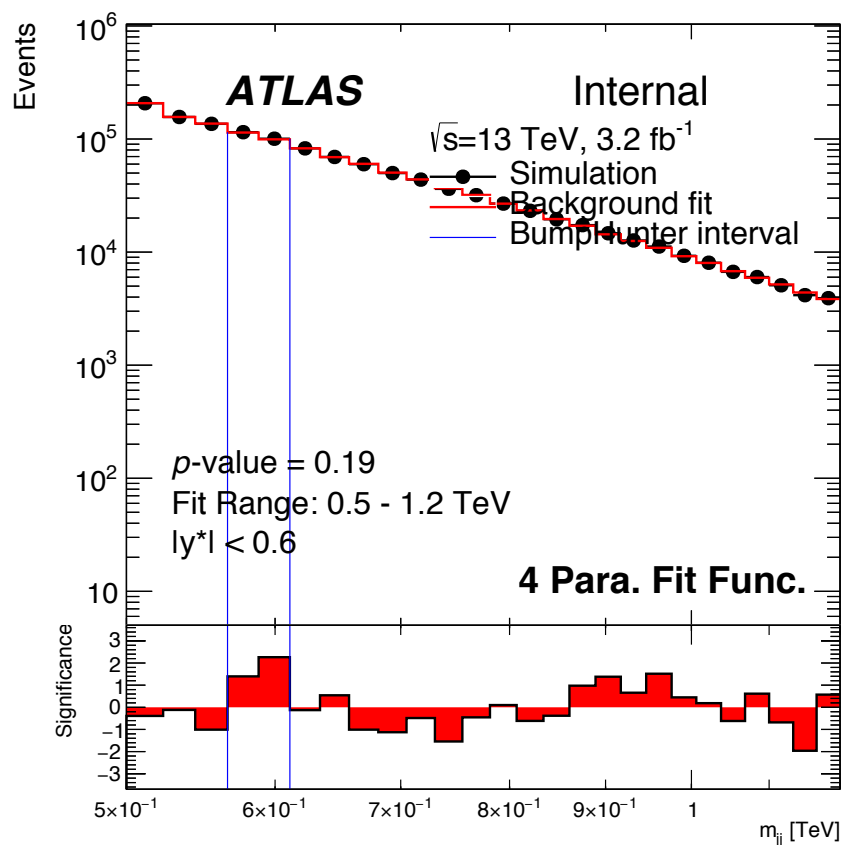


- **Confirm that fits discrepancies are not significantly occurring**
 - Fit discrepancies may fake or disguise signal
 - Fits performed to a representative background only data set can test fit function
- **Monte Carlo**
 - Pythia8 Dijet Sample, same cuts as in data
 - Except trigger, emulated using p_T dependant b-jet and non b-jet efficiencies (slide 10)
 - Problems with statistics, Effective Entries < Scaled Entries
=> Not poisson-like errors





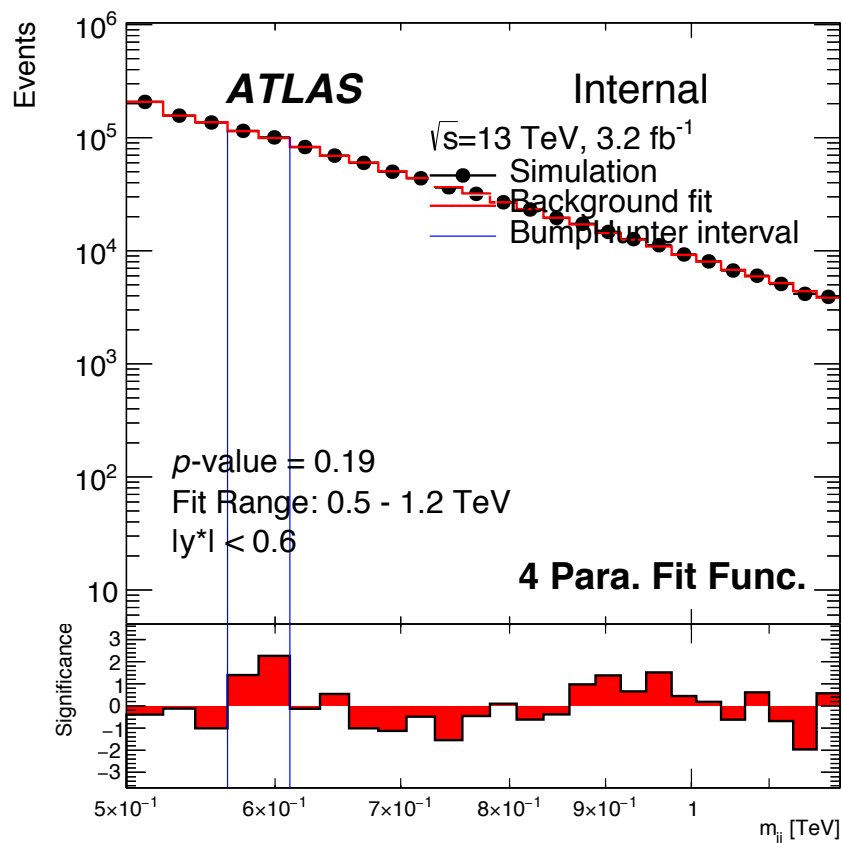
- **Fit to Data with Trigger Applied**
 - b-Tagging not applied, so we are not blinded.
 - Dominated by bl, but this give us a similar, but different control region to test fitting
- **Poor Fit**
 - Periodic structure, thus not a statistical fluctuation
 - Also hints of this in blinded double b-tag spectrum



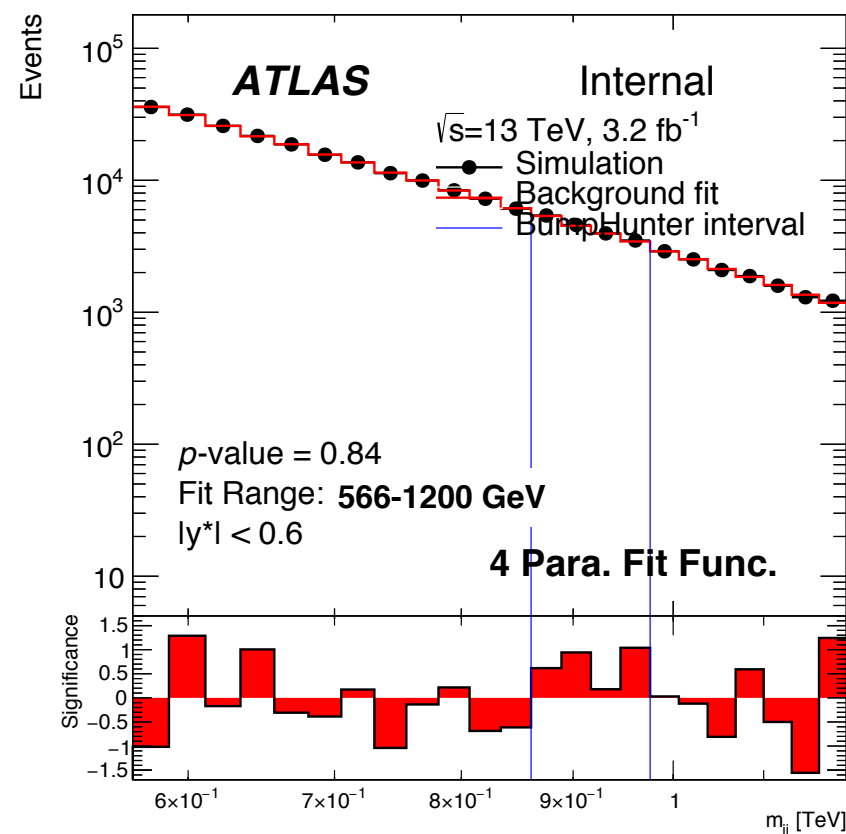


- **Changing Fit Range**
 - We tried removing lower bins, fit quality improves
 - Find that for the range 566-1200 we get an much improved fit
- **Could be signs of trigger turn on or other effect?**

500-1200 GeV

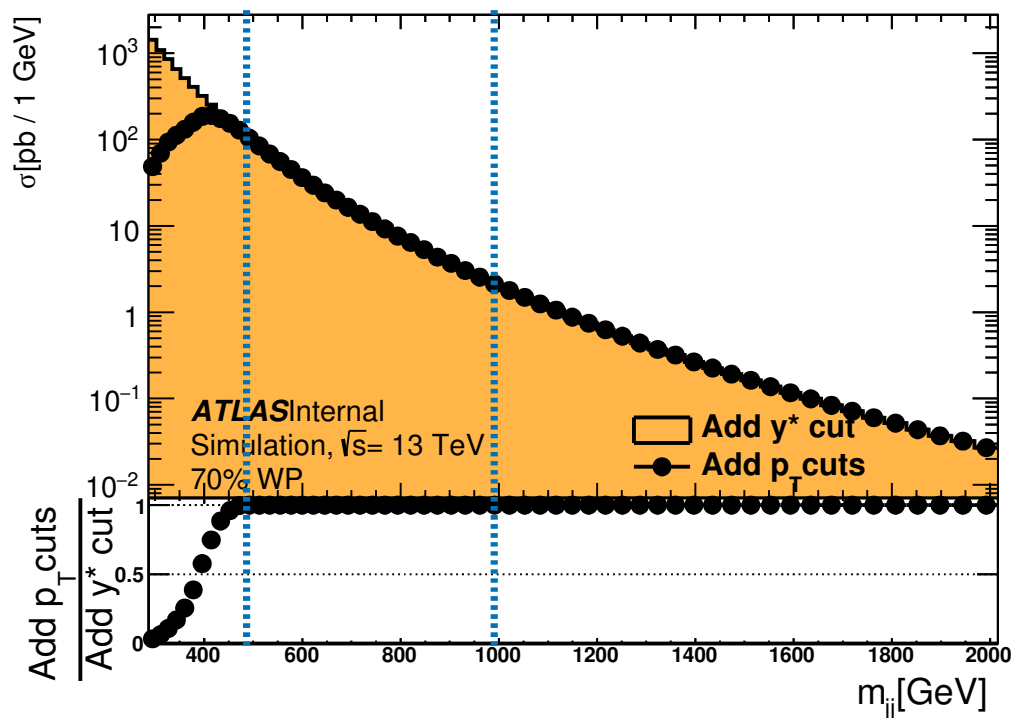


566-1200 GeV





- **Changing Fit Range**
 - We tried removing lower bins, fit quality improves
 - Find that for the range 566-1200 we get an much improved fit
- **Could be signs of trigger turn on or other effect?**
 - Close to P_T turn on? See Karol's plot...





6 Full Set of Range Chaning Fits

