H → W W + 2 jets Analysis

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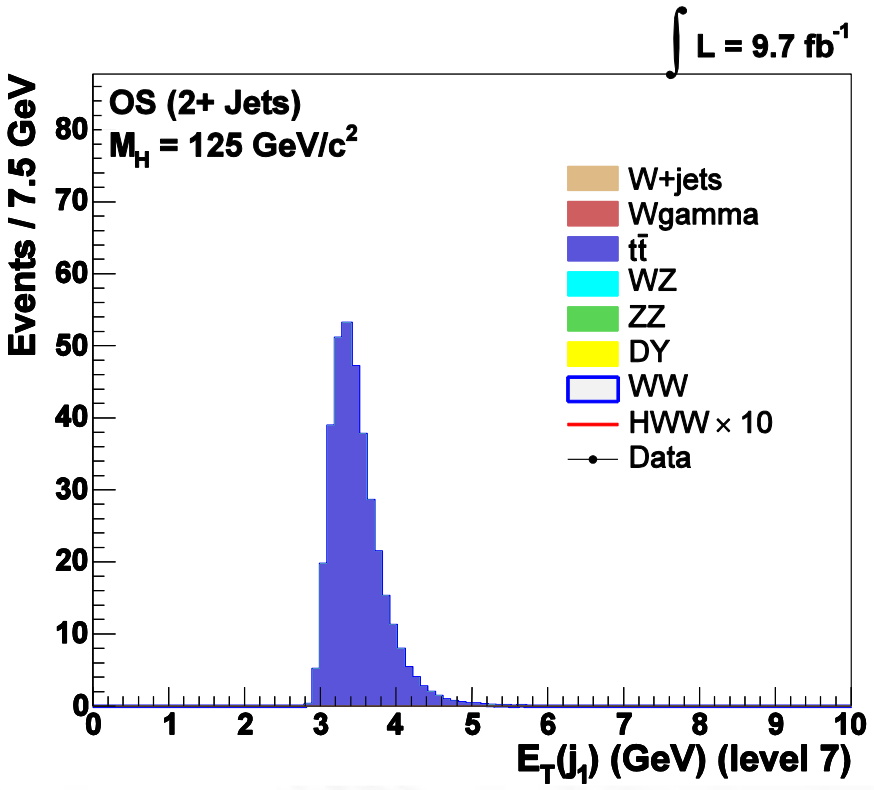
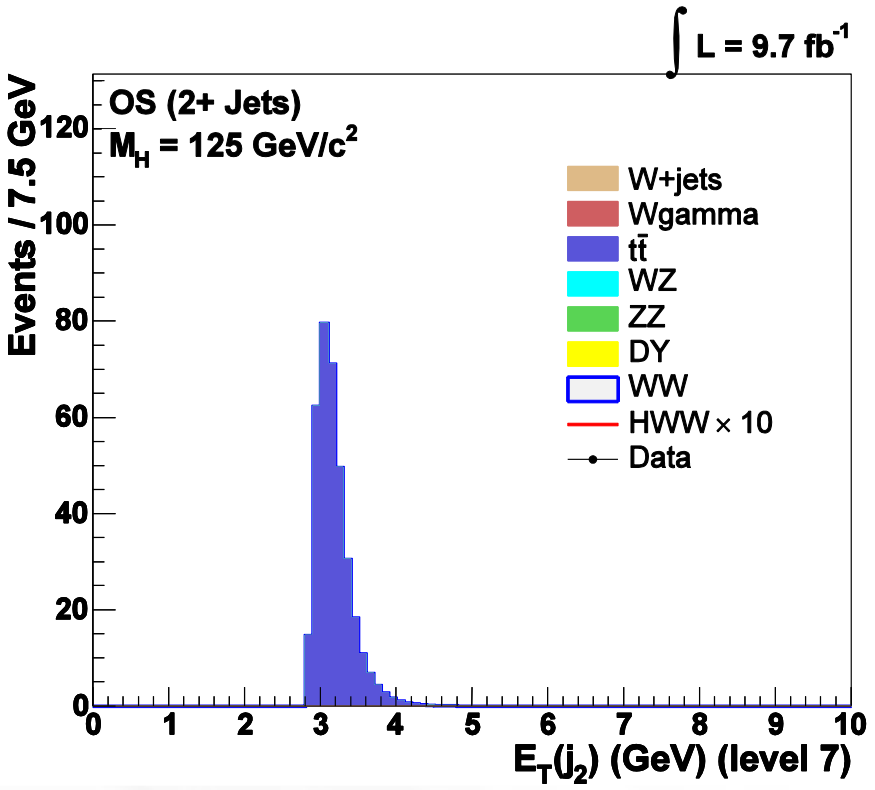
Introduction

- Processed ttbar MC as a test sample
- Looking at ttbar control region
- Ntup now includes:
    - Number of partons found
    - parton E, Et, Eta, Phi
    - Level 7 Jet Energy corrections
- Ready to reprocess all MC if you think these distributions look okay (I'm concerned about parton 1 eta)

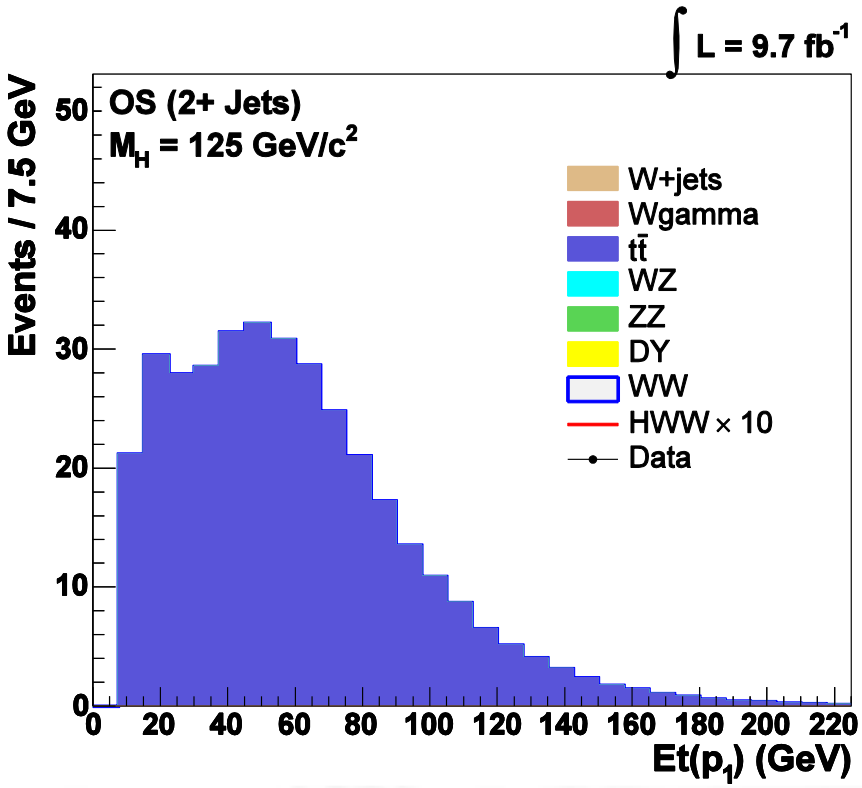
Jet Et (L7-L5)

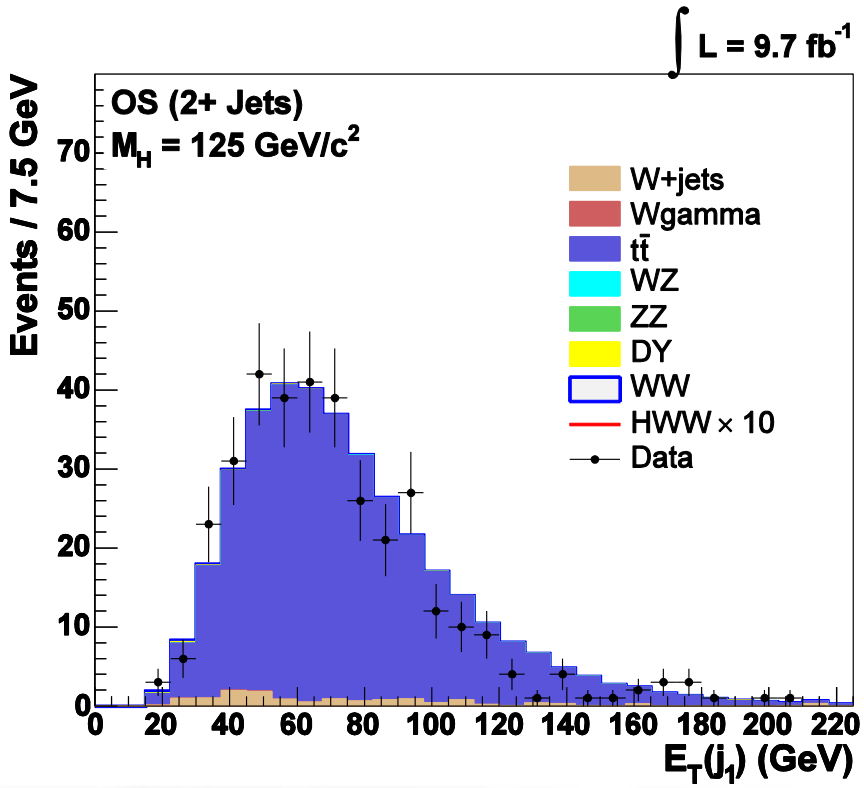




- Contrary to X-Axis label, this is Et(L7)-Et(L5)
- Small correction, always positive
- I believe this looks okay

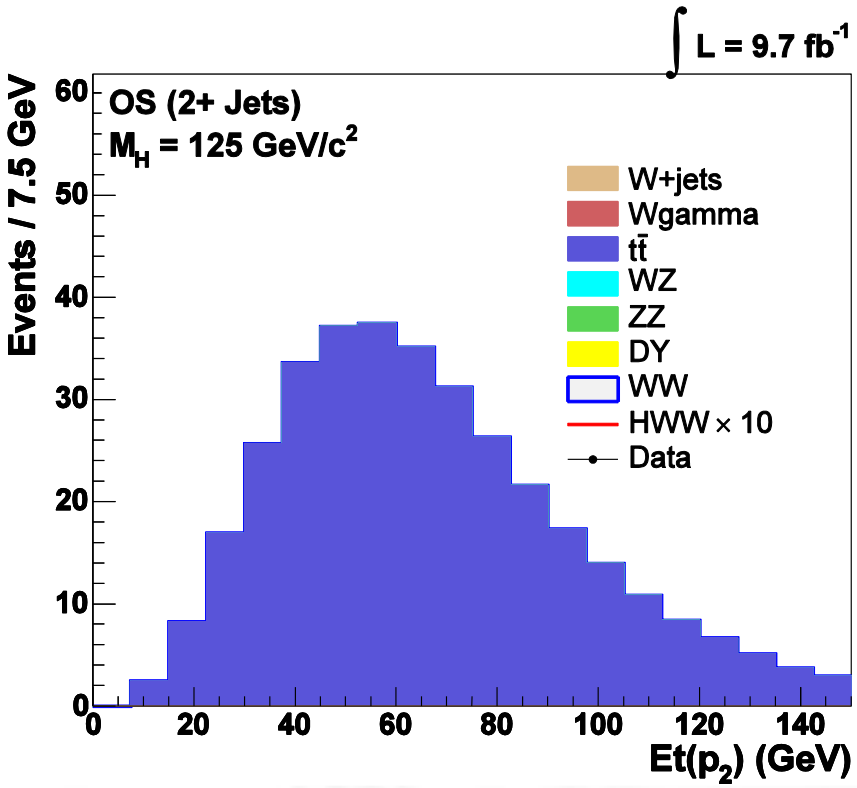
Jet/Parton 1 Et

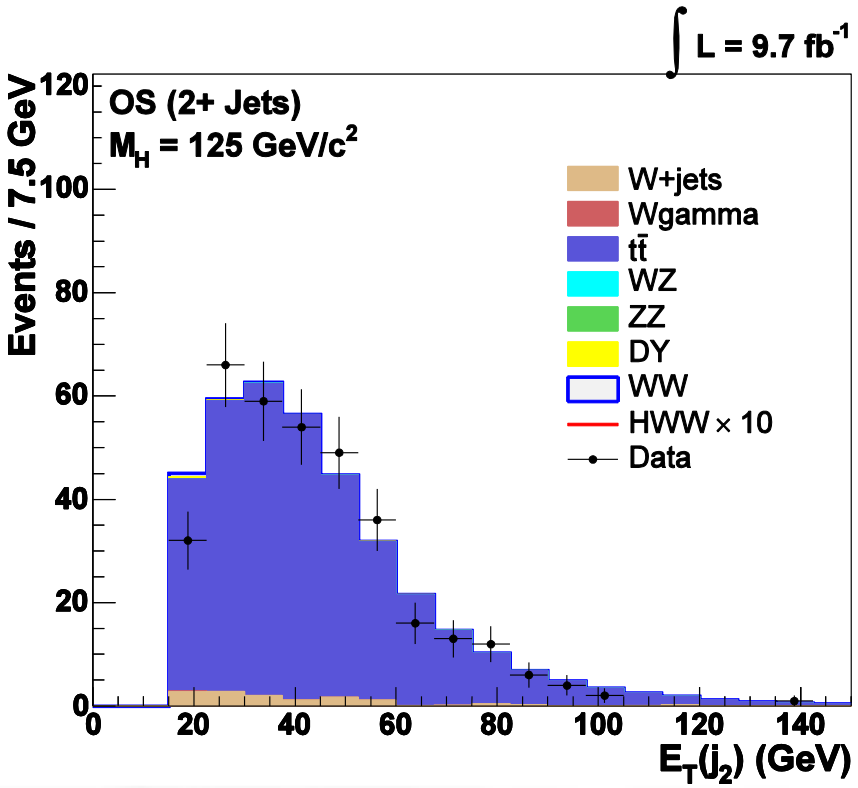




Not sure what to expect here, but it makes sense that the lower Et partons would get cut out

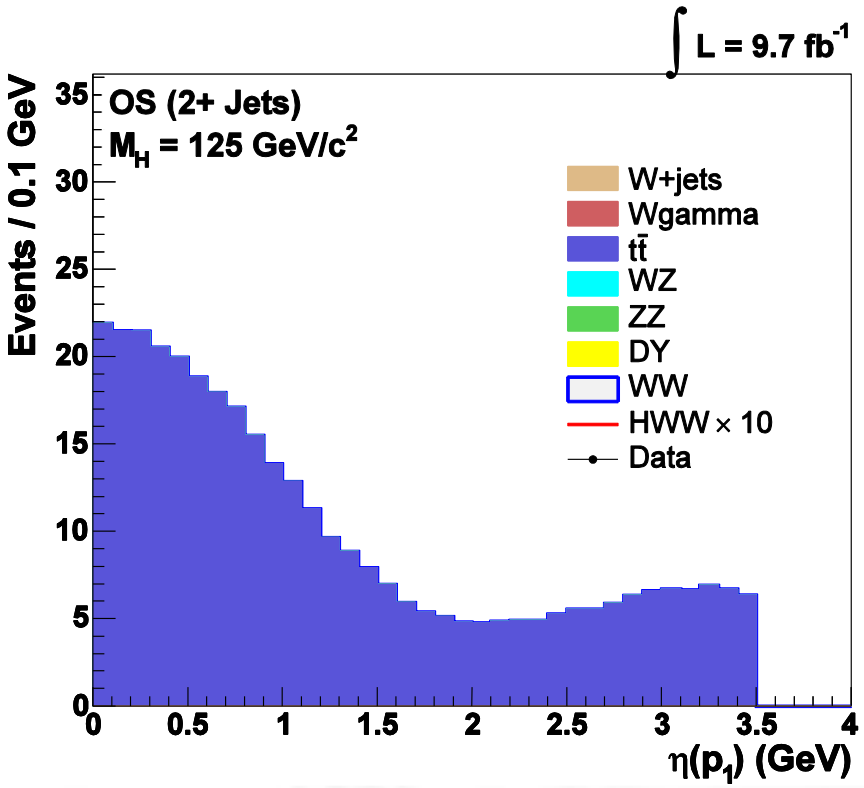
Jet/Parton 2 Et

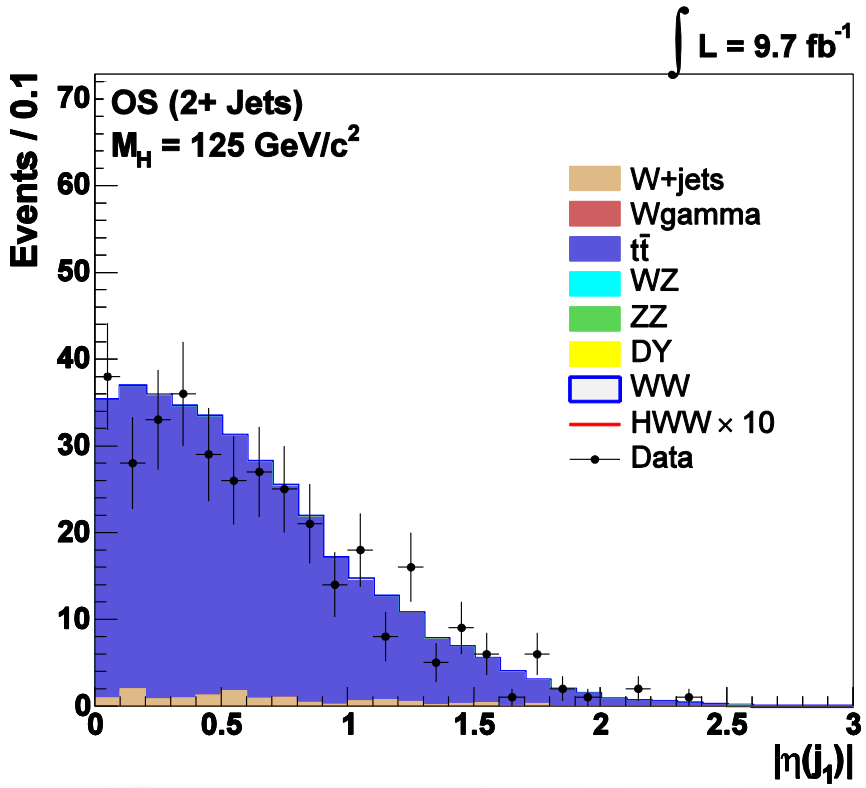




Agreement looks fine to me

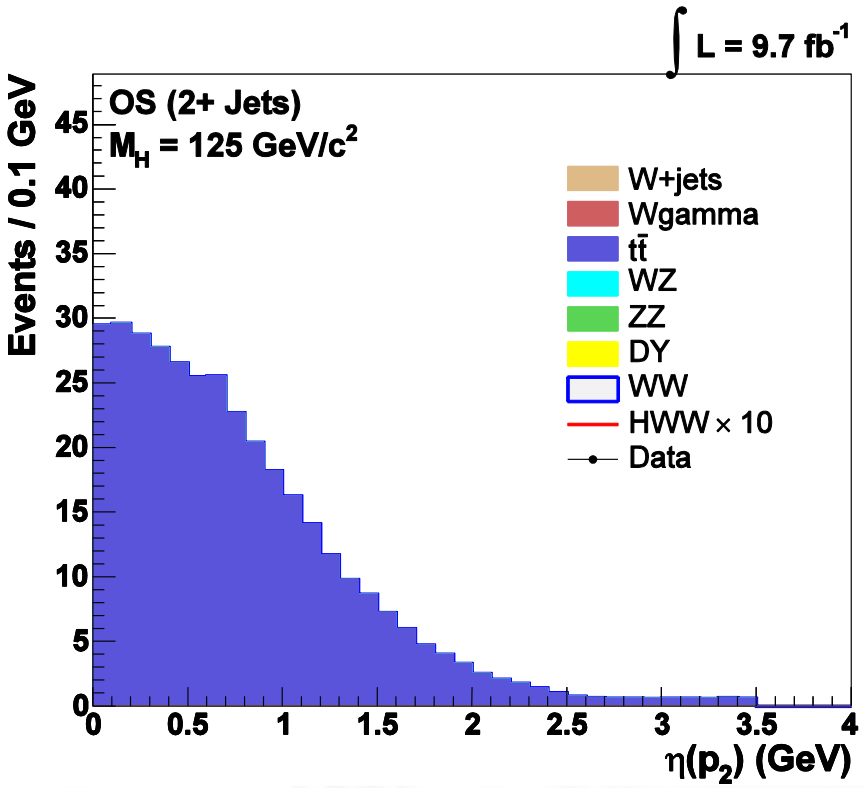
Jet/Parton 1 Eta

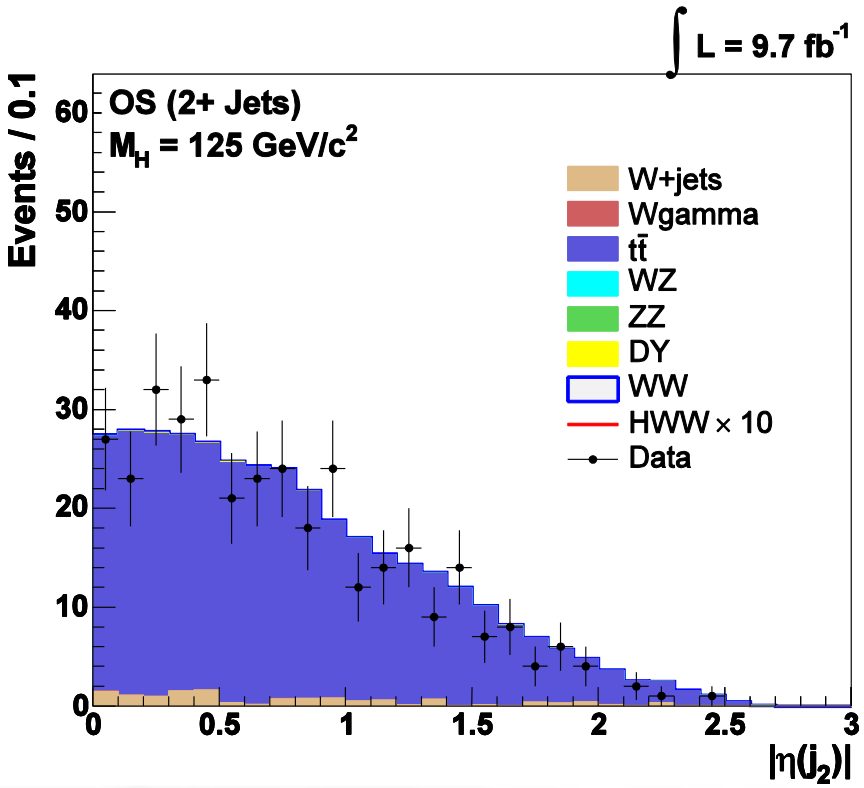




I don't understand why the parton eta distribution would increase after 2. Is this understood?

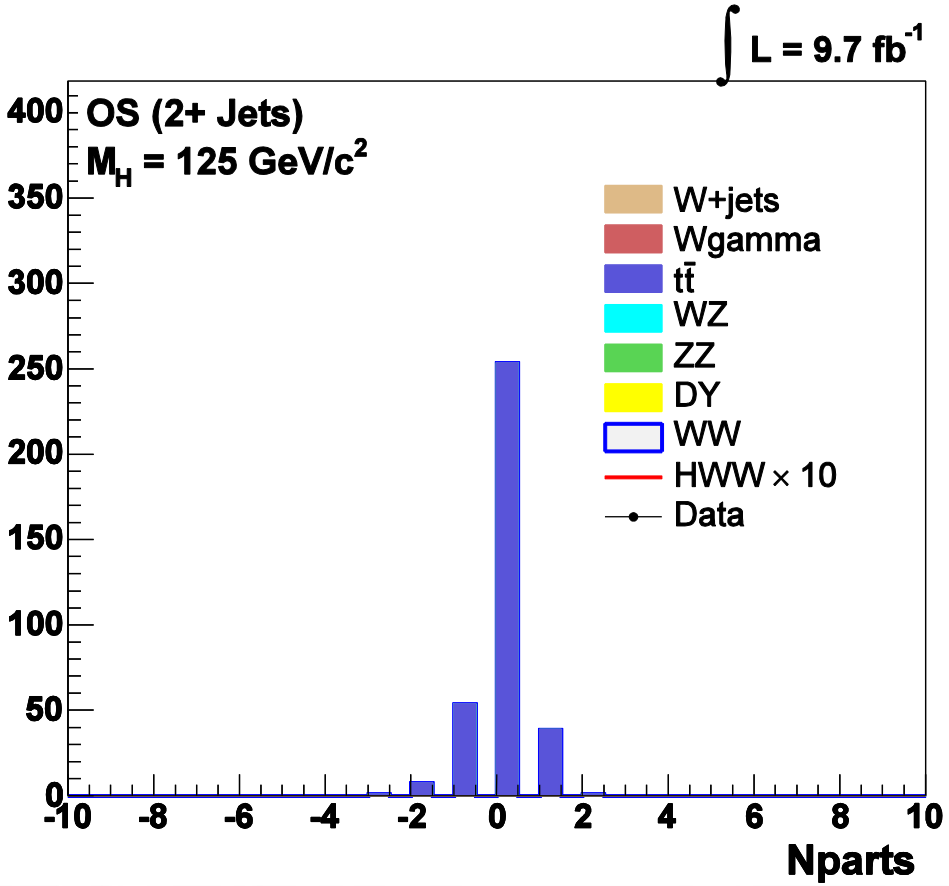
Jet/Parton 2 Eta





Don't see the same increase at large eta here. The distributions seem to be in good agreement.

Npartons - Njets



- Difference between Npartons and Njets
- Parton definition: Et < 10, |Eta| < 3.5
- Jet definition: Et < 15, |Eta| < 2.5
- Slightly more jets than partons seems reasonable