H → W W + 2 jets Analysis

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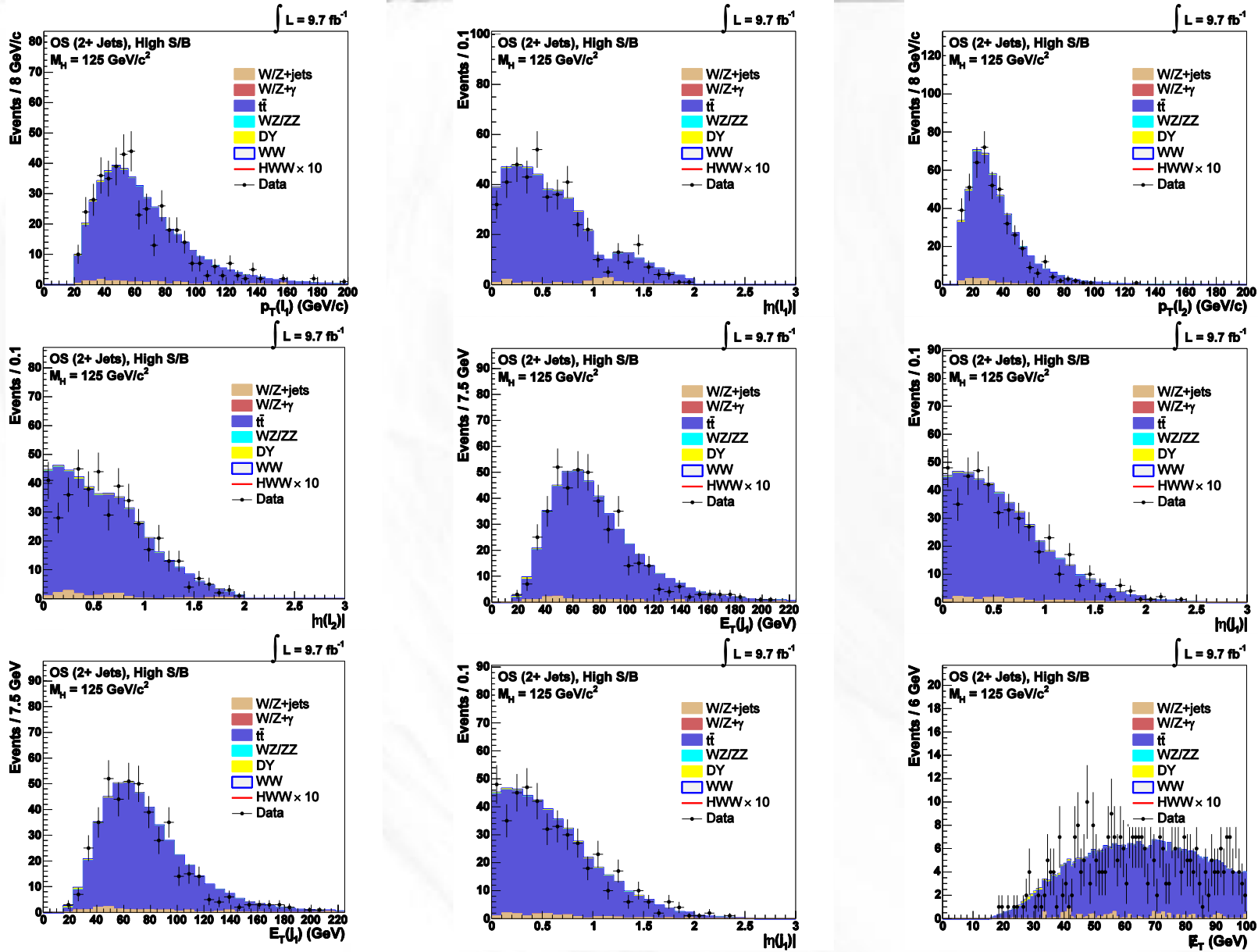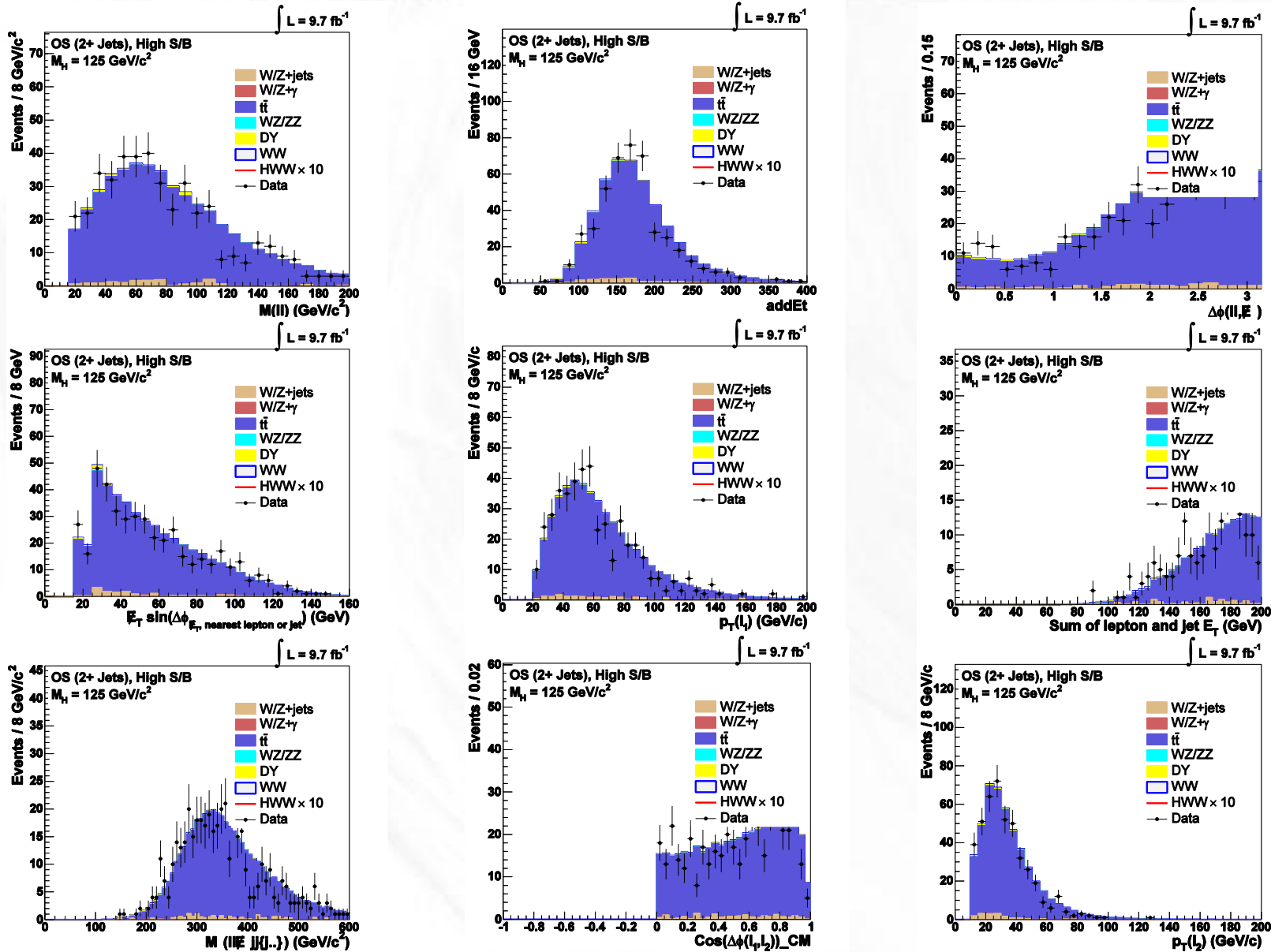
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07/23/12

Update

- Added parton information to ntps
  - Require quark or gluon
  - Require Et > 10 GeV, |Eta| < 3.5
  - In test sample no parton from the first four (incoming parton or ISR) passes these cuts
  - Will need to check in full sample
  - Still to do: add level 7 Et correction
- HOBIT btagging and mistagging is working
  - See plots
- New neural net plot (not optimized yet)

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Control Region: tt–Basic Kinematics
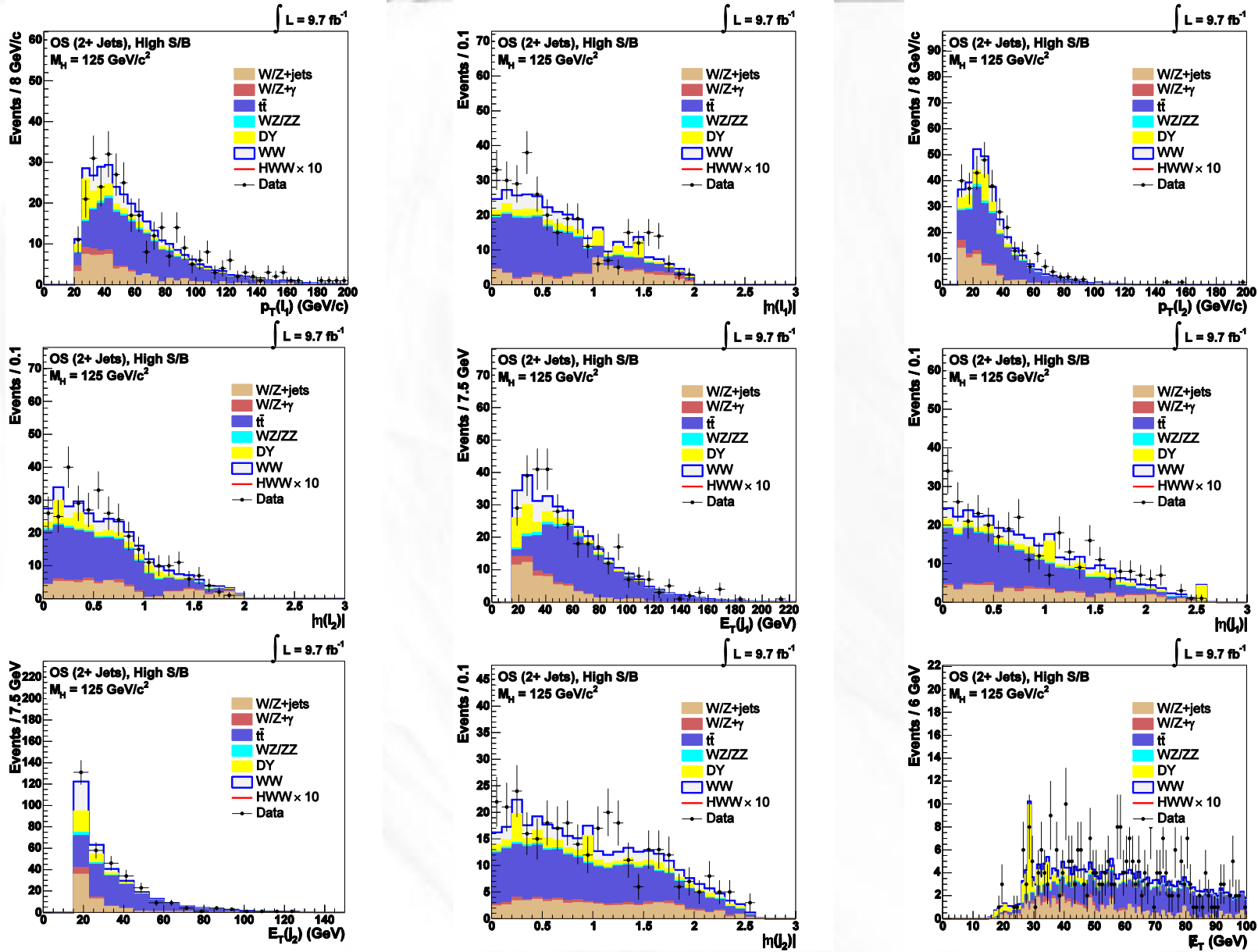

Should add dPhiLepSumMet and Dimass cuts (?)
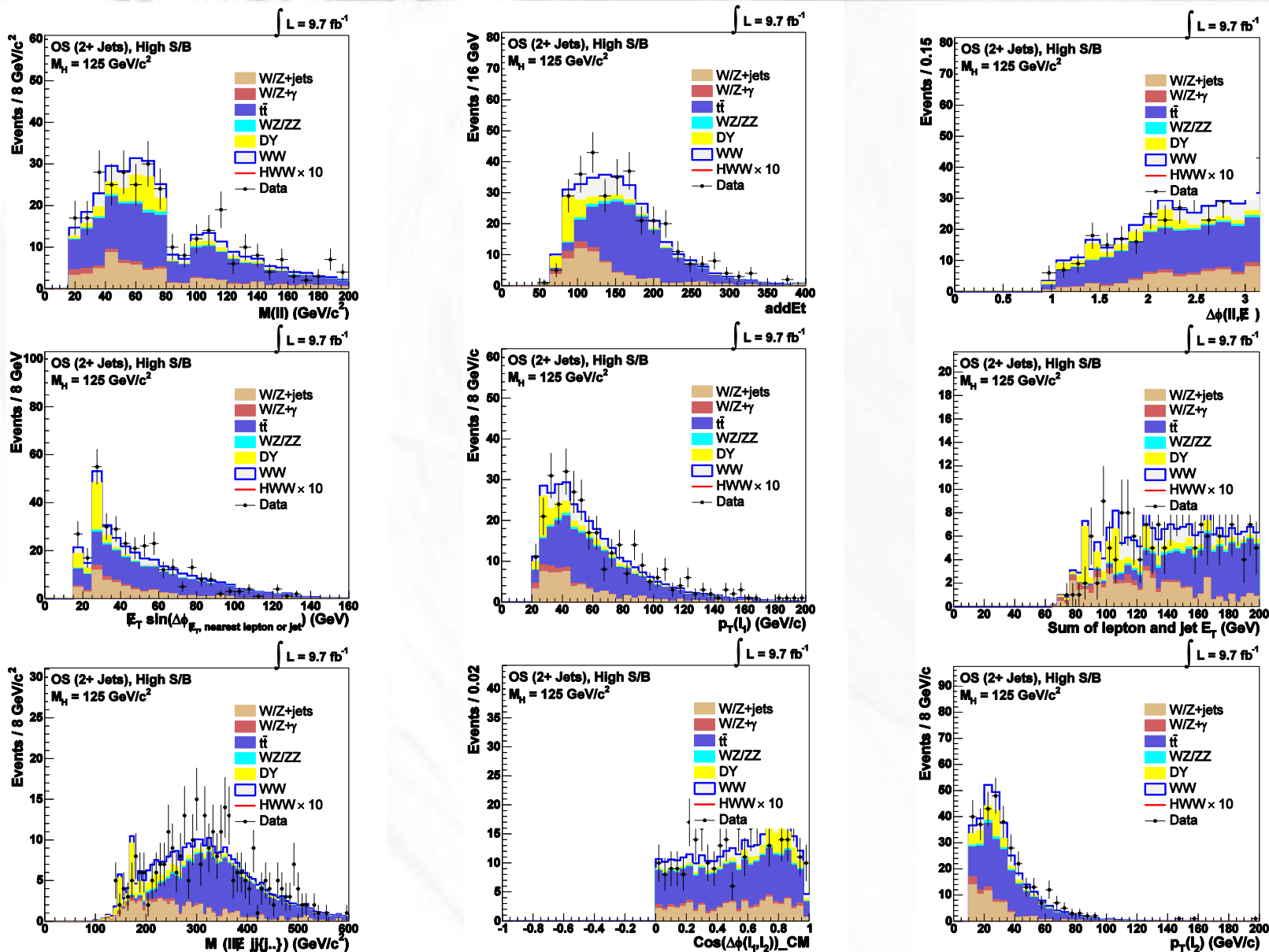
Control Region: tt–Discriminating Variables

Kinematically identical to signal region, but require one or more btags. Good data-MC agreement.
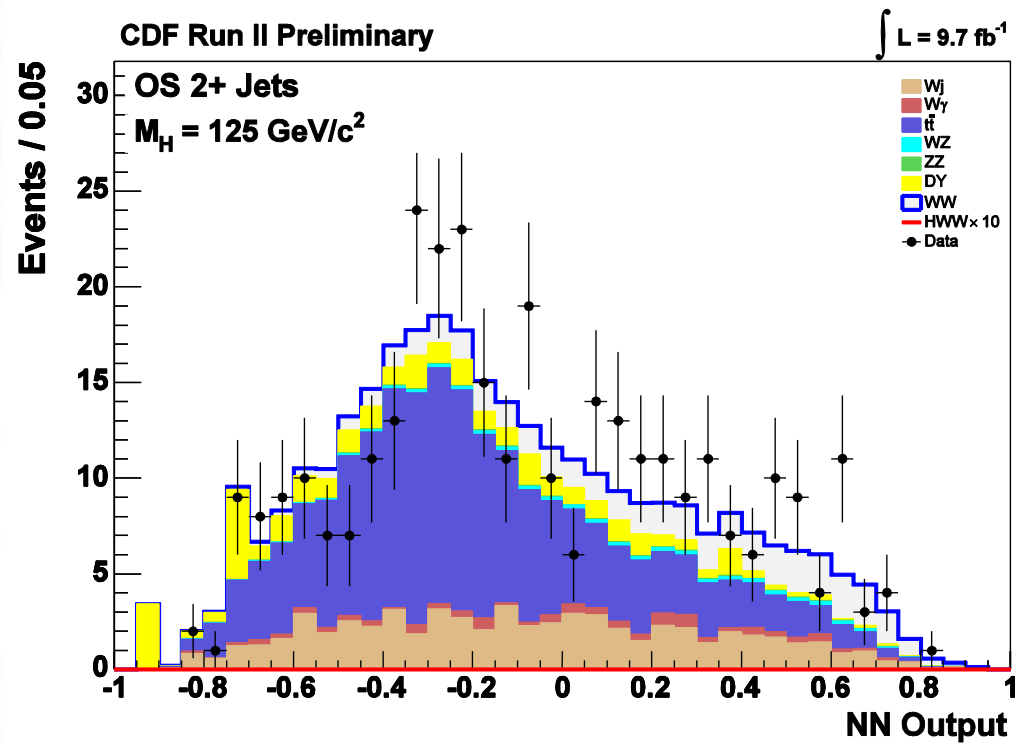
Signal Region: Basic Kinematics

Should add dPhiLepSumMet and Dimass cuts (?)

Kinematically identical to signal region, but require one or more btags. Good data-MC agreement.

WW Neural Net

To Do:

• Optimize

  • HOBIT operating point

  • Neural Net cut

  • Neural Net variables

Backup

WW Neural Net

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Control Region: tt–Discriminating Variables

Kinematically identical to signal region, but require one or more btags. Good data-MC agreement.
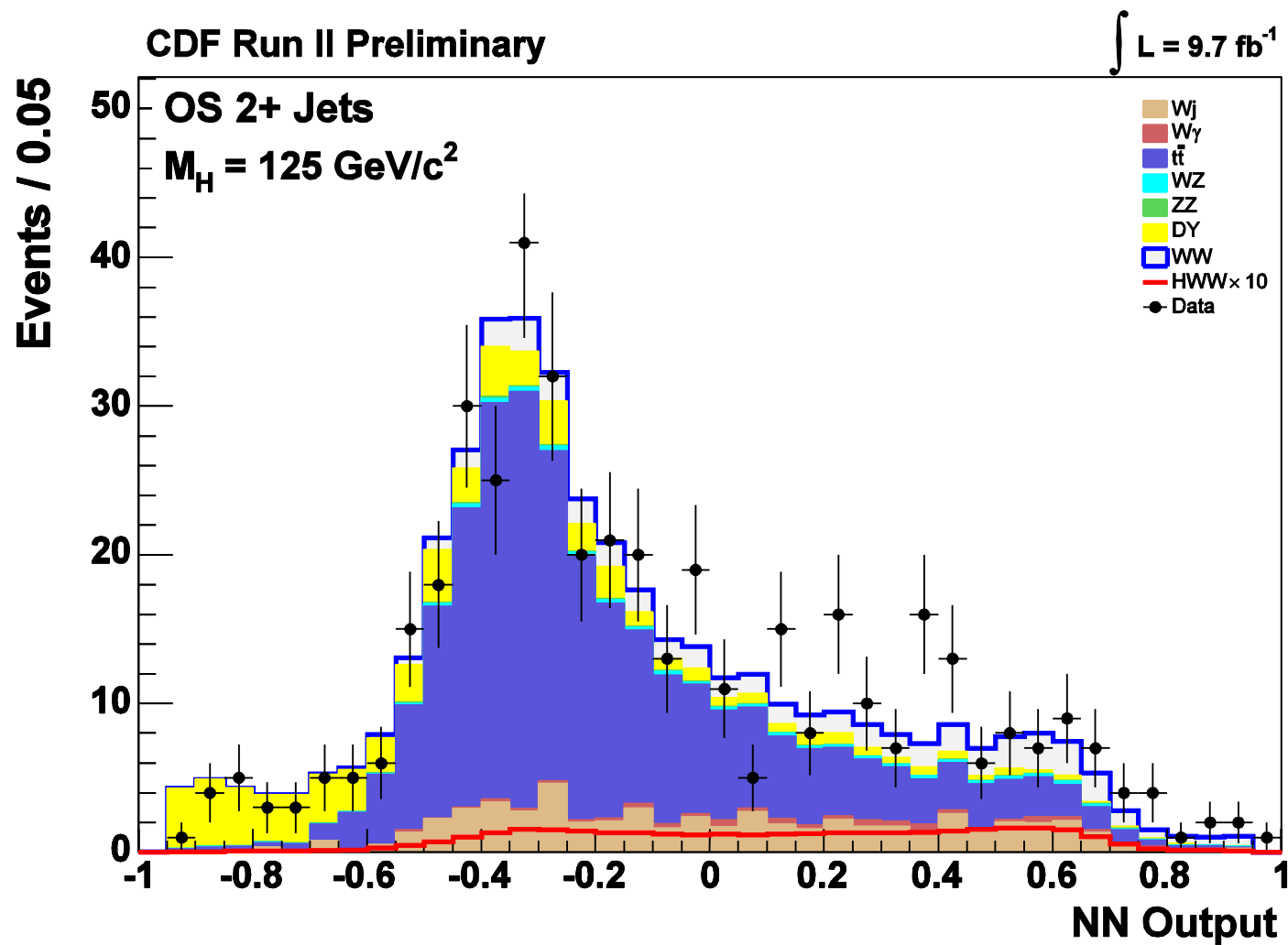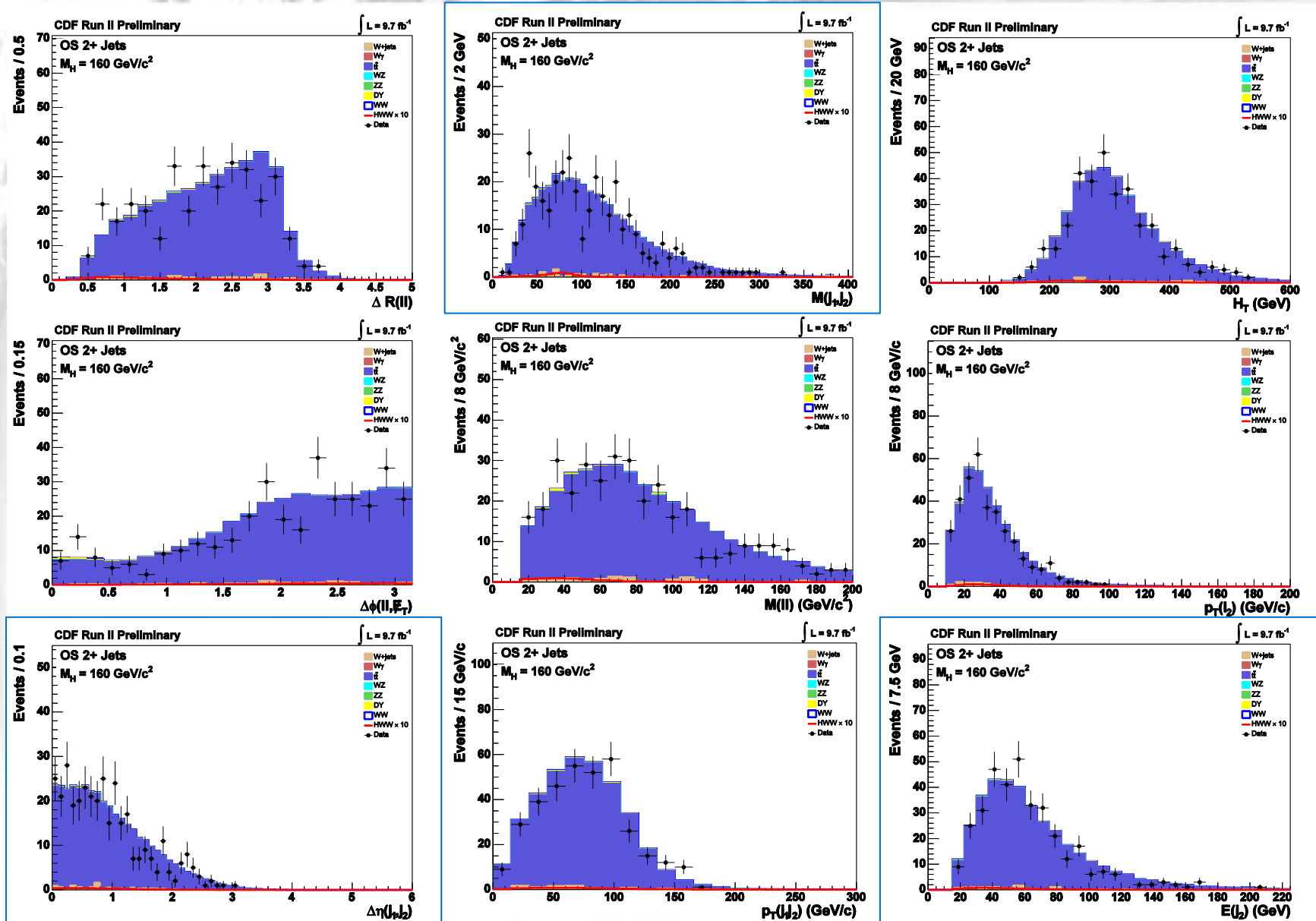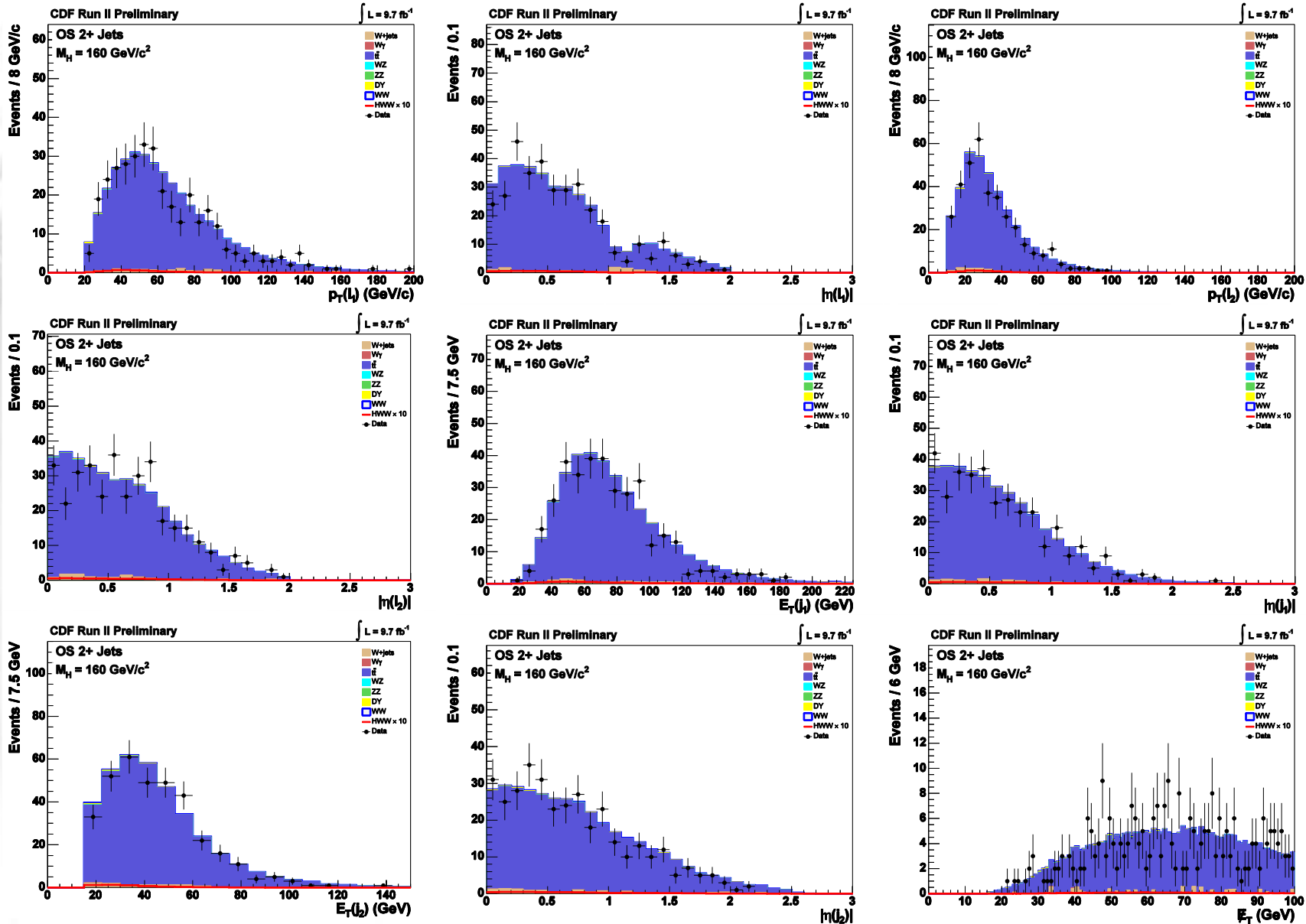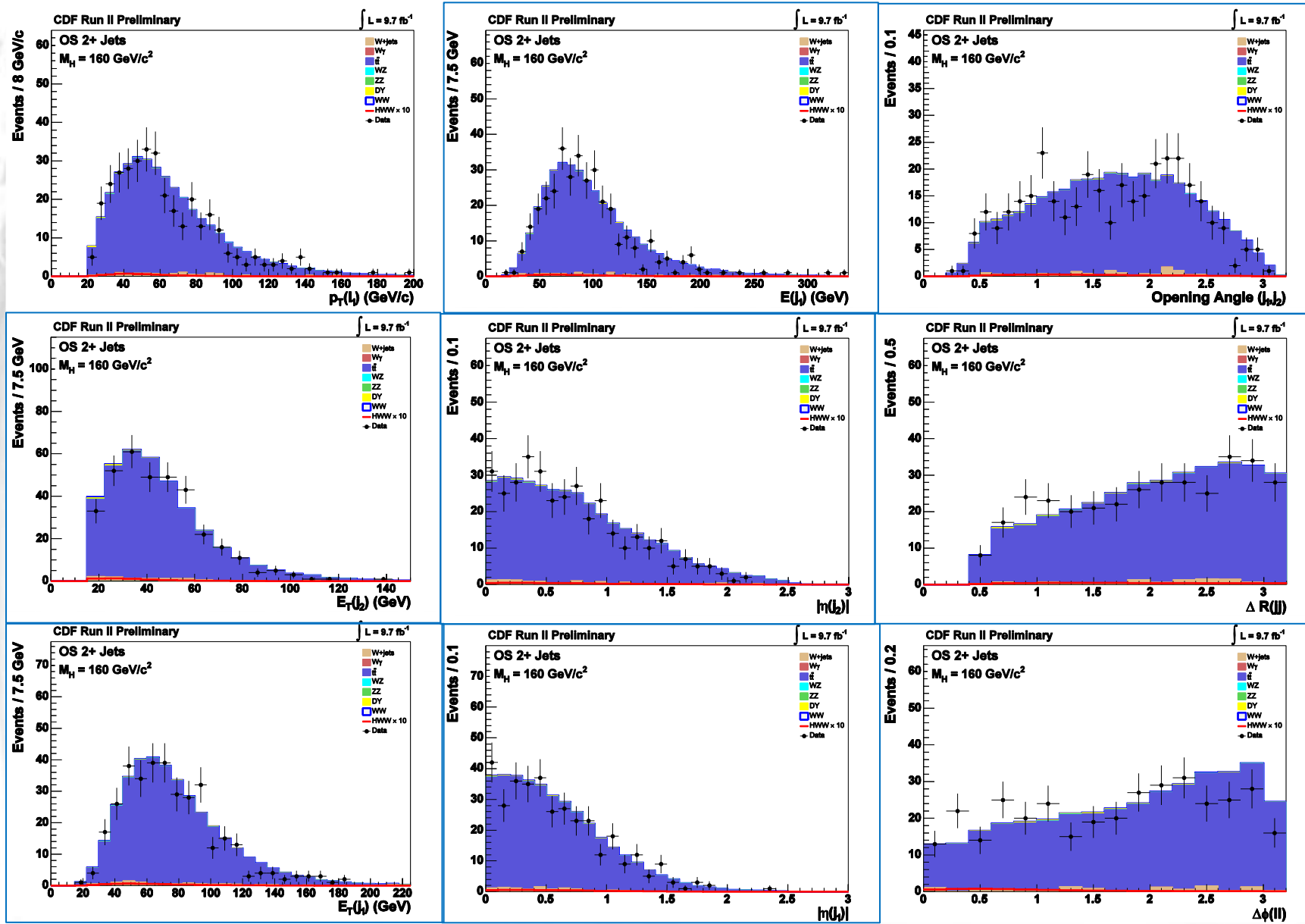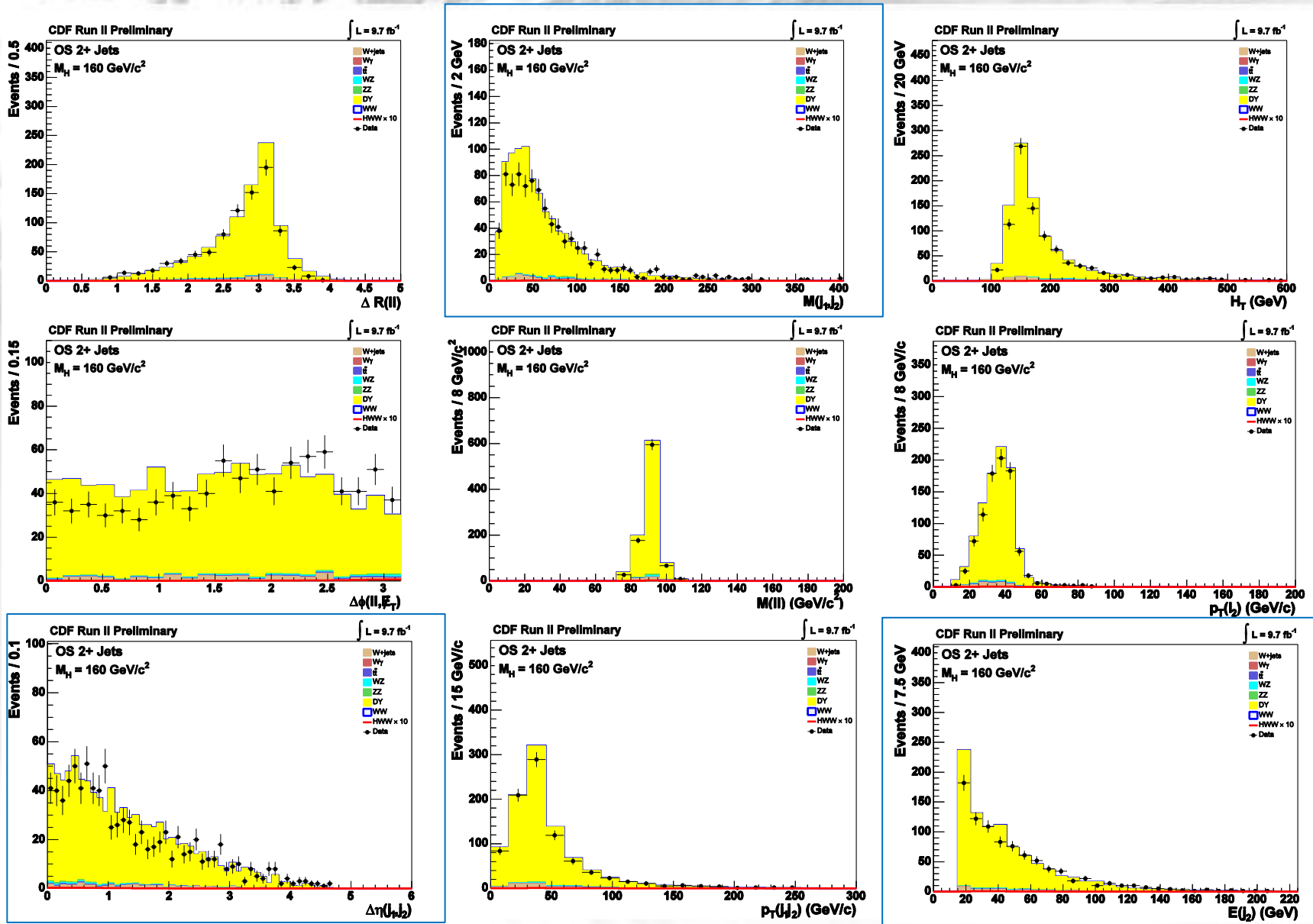
Control Region: tt–Basic Kinematics

Kinematically identical to signal region, but require one or more btags.
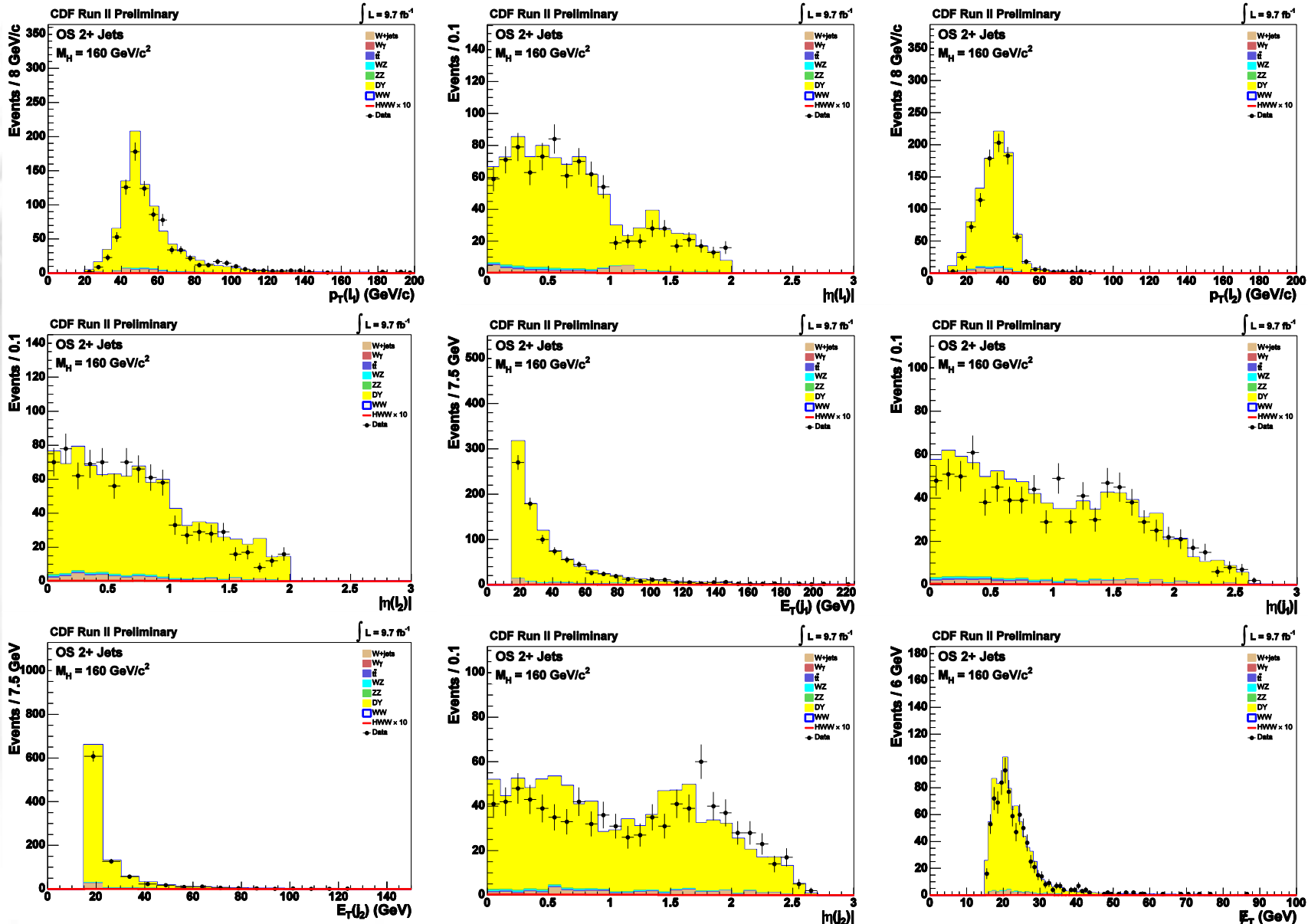Good data-MC agreement.

Kinematically identical to signal region, but require one or more btags.
Good data-MC agreement.
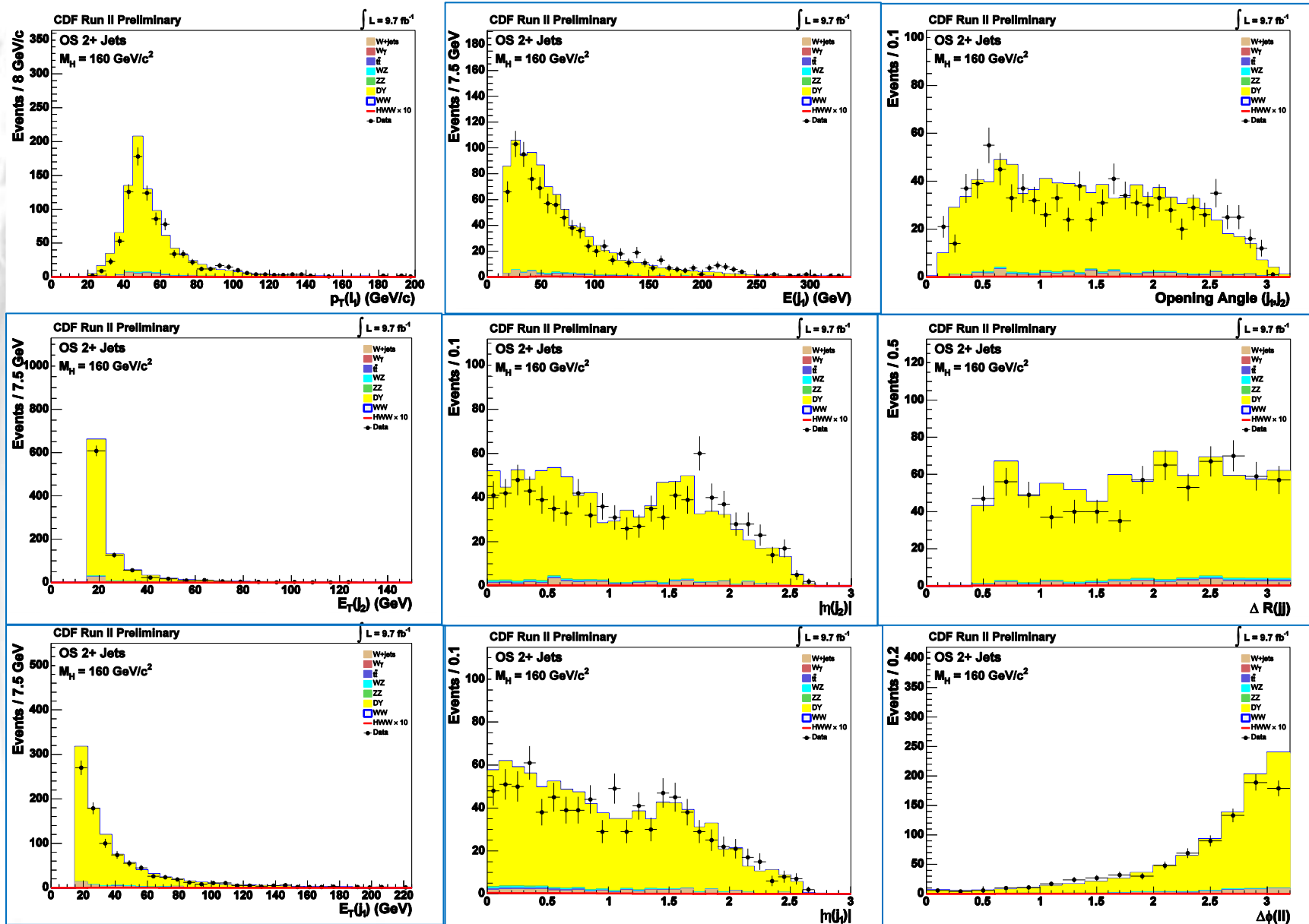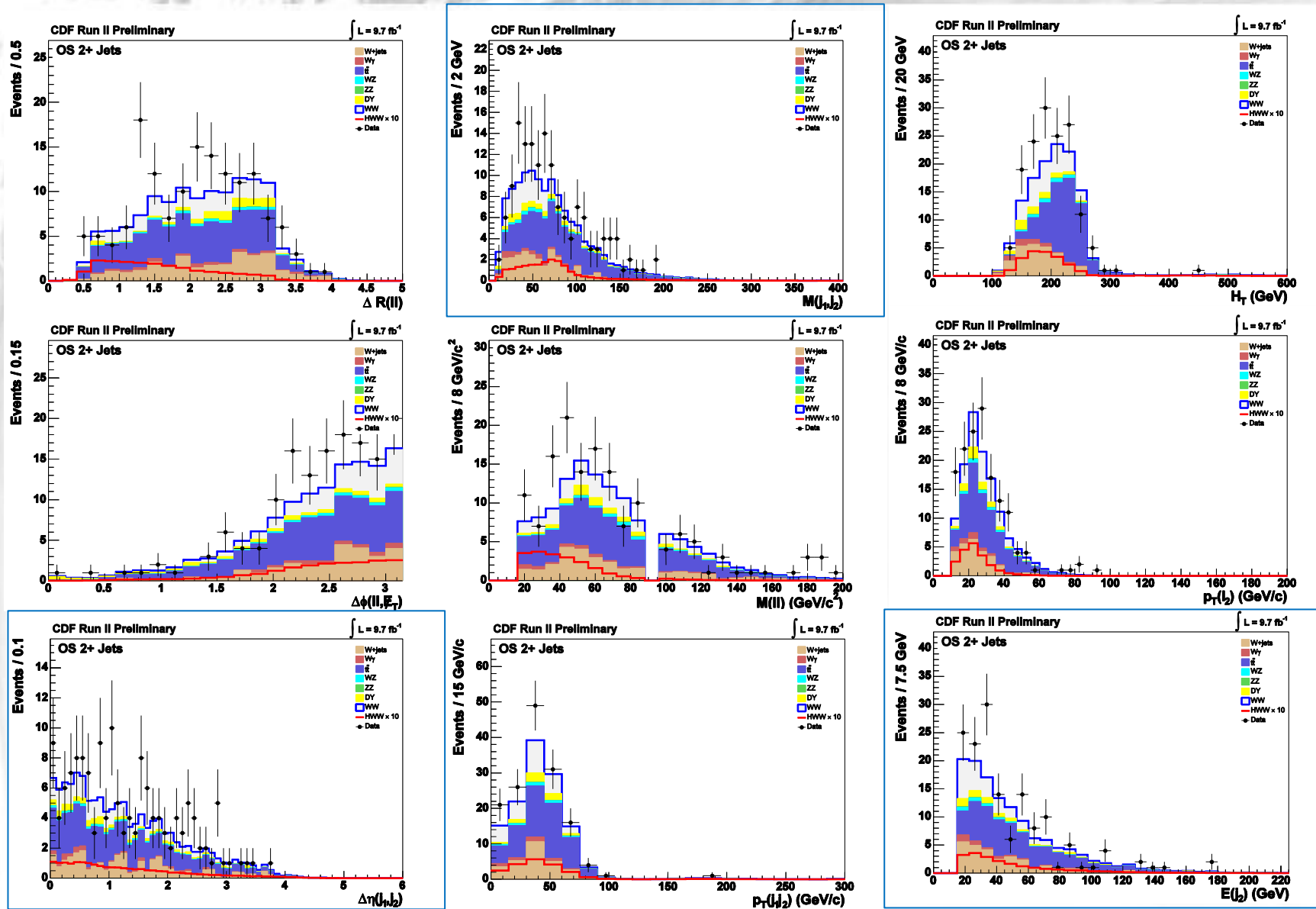
Control Region: DY–Discriminating Variables

Use DY3 CR (intermediate Met, Zpeak, same flavor) with 2+jets requirement. Difficulties in modeling are reflected in JES systematic.

Control Region: DY–Basic Kinematics

Use DY3 CR (intermediate Met, Zpeak, same flavor) with 2+jets requirement. Difficulties in modeling are reflected in JES systematic.

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Control Region: DY-Discriminating Vars 2
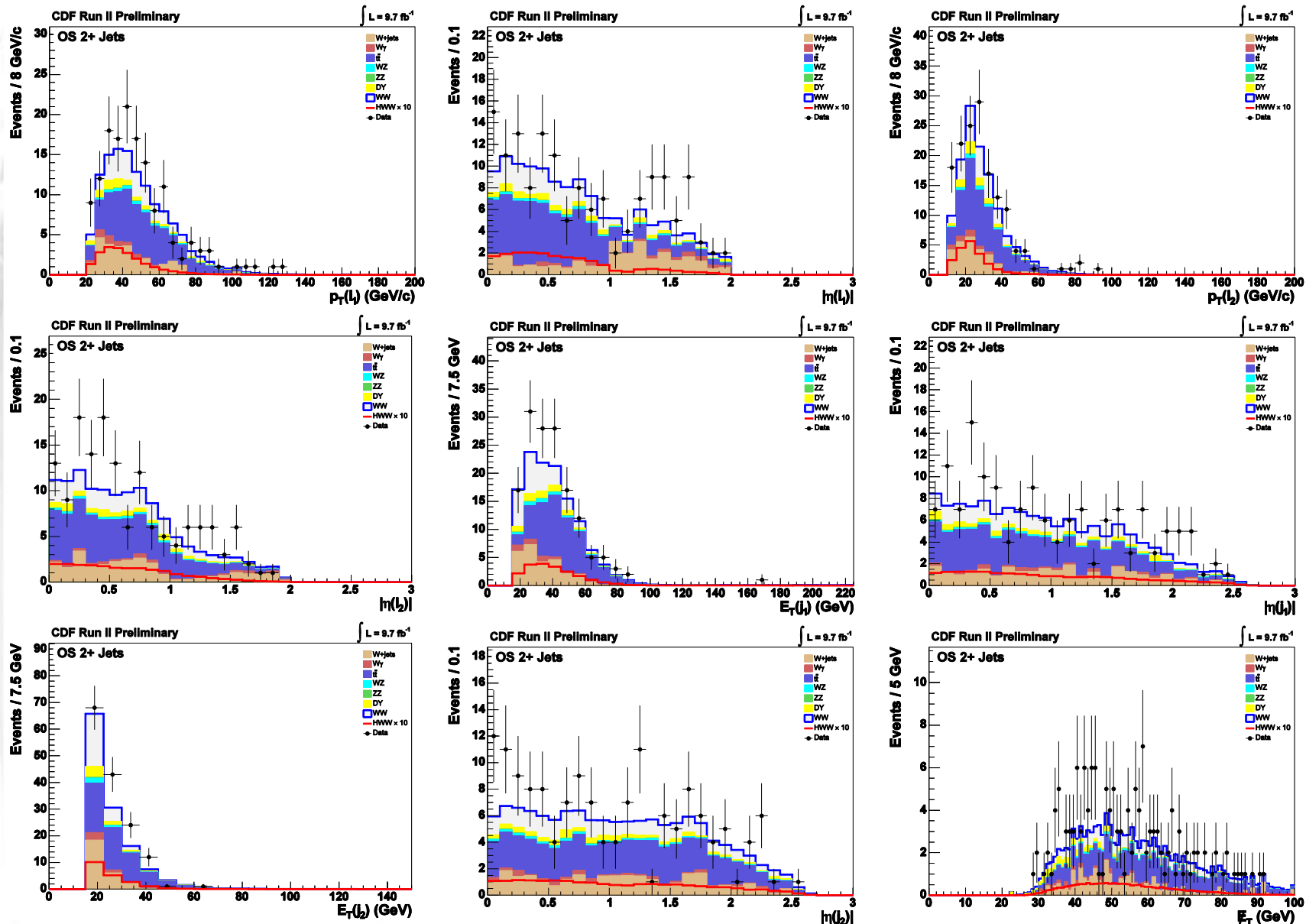

Use DY3 CR (intermediate Met, Zpeak, same flavor) with 2+jets requirement. Difficulties in modeling are reflected in JES systematic.
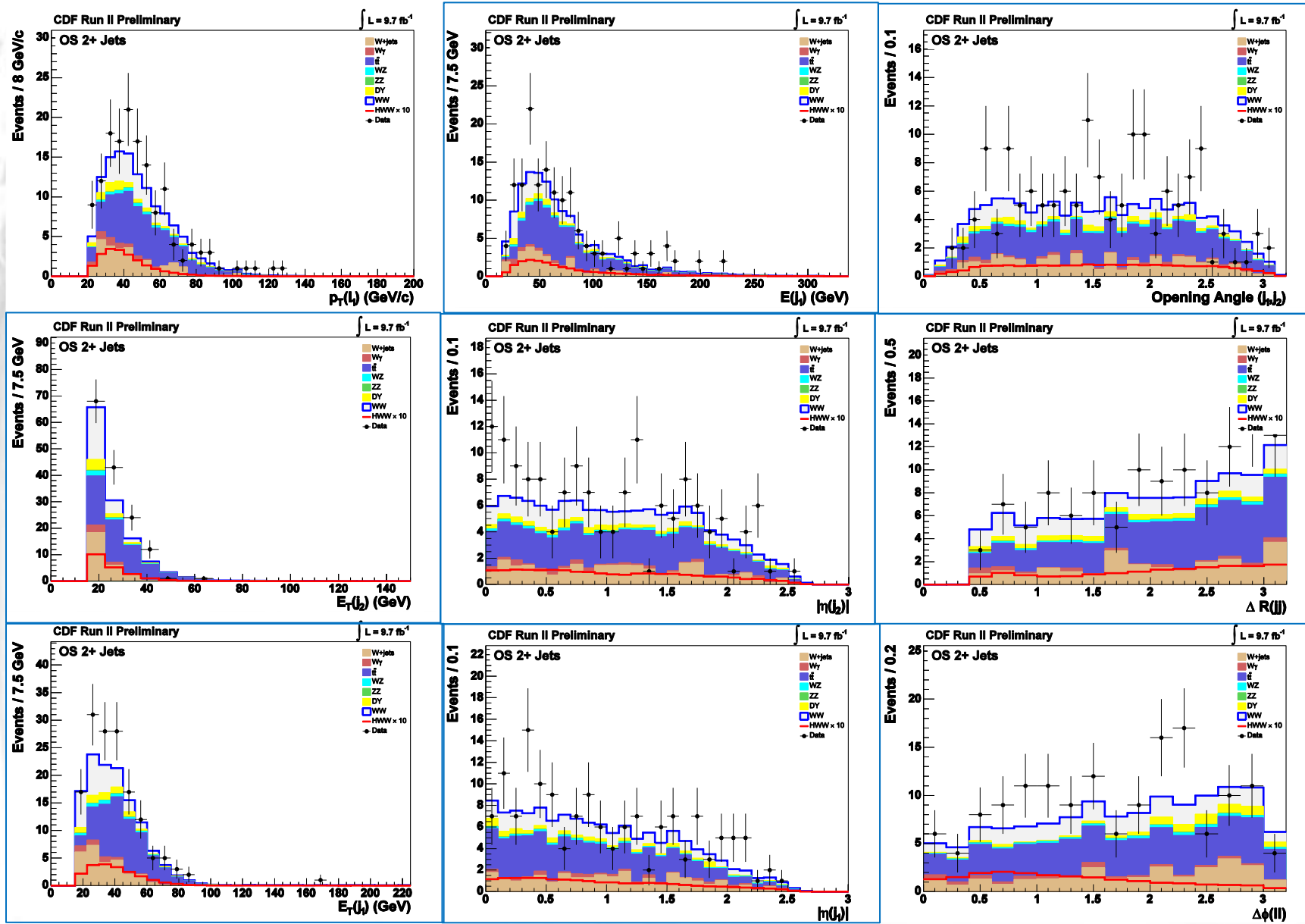
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Enhanced Region: WW–Discriminating Vars

No significant data-MC disagreement.

No significant data-MC disagreement.

Control Region: WW-Discriminating Vars 2

No significant data-MC disagreement.