



MET working points

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□ Comparing Loose and tight MET working points

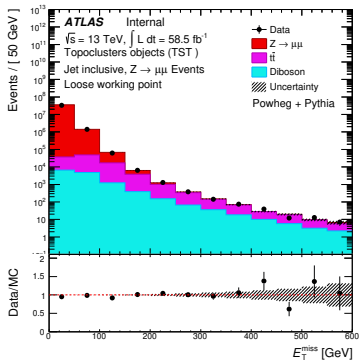
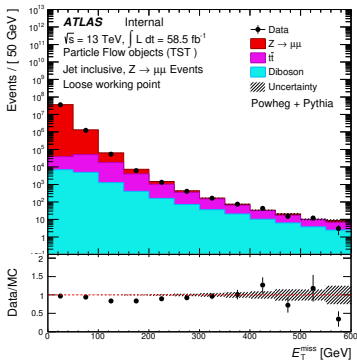
- mc16e for Powheg and Sherpa
- For $Z \rightarrow \mu\mu$

□ We have three working points

- Loose: $p_T^{fwjet} > 20$ GeV
- Tight: $p_T^{fwjet} > 30$ GeV
- Tighter: $p_T^{fwjet} > 35$ GeV
- Tenacious: $p_T^{fwjet} > 35$ GeV

Summary

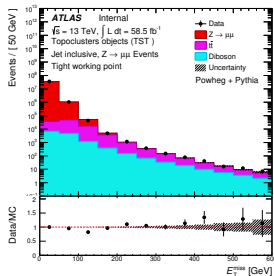
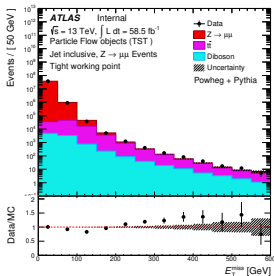
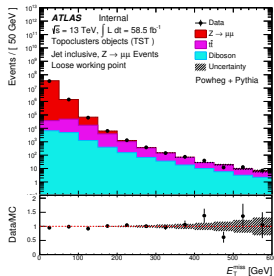
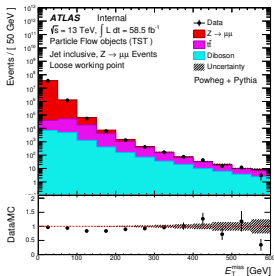
E_T^{miss} distribution $Z \rightarrow \mu\mu$ events



E_T^{miss} distribution

$Z \rightarrow \mu\mu$ events, Powheg+Pythia8

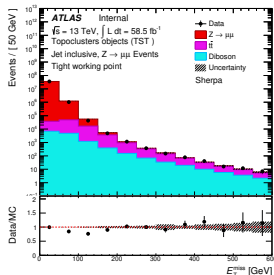
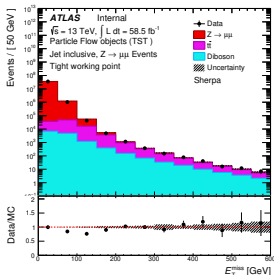
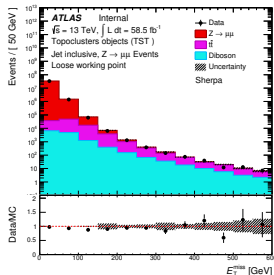
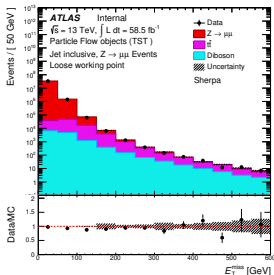
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E_T^{miss} distribution

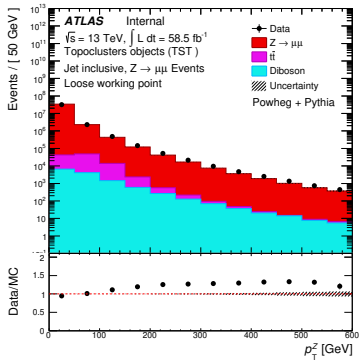
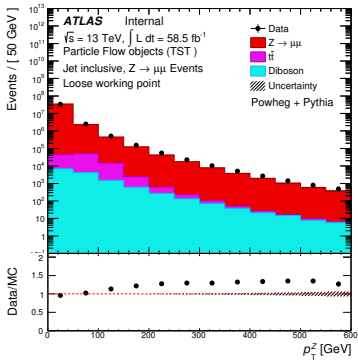
$Z \rightarrow \mu\mu$ events, Sherpa

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p_T^Z distribution

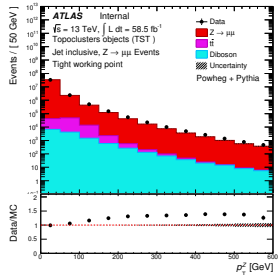
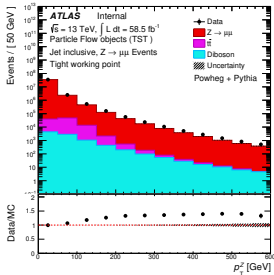
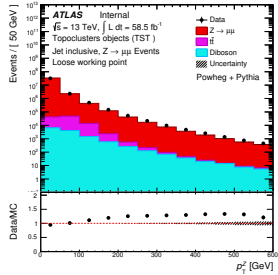
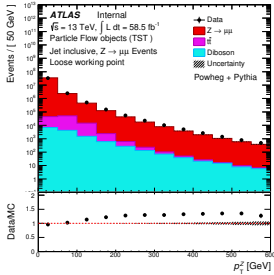
$Z \rightarrow \mu\mu$ events



p_T^Z distribution

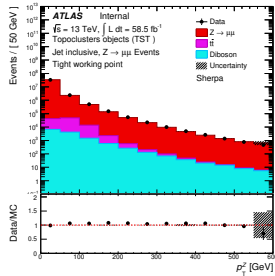
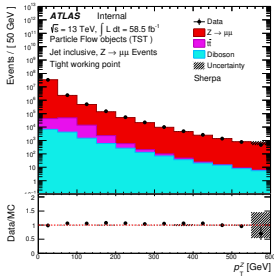
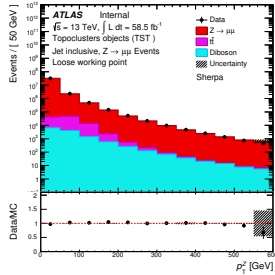
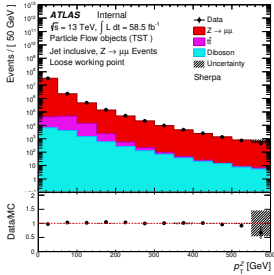
$Z \rightarrow \mu\mu$ events, Powheg+Pythia8

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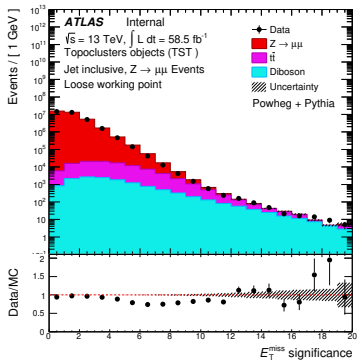
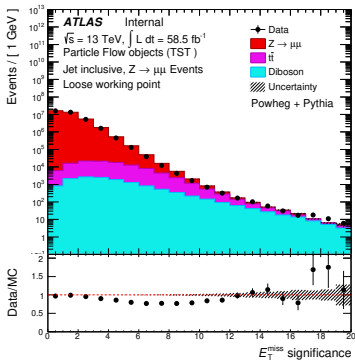


p_T^Z distribution

$Z \rightarrow \mu\mu$ events, Sherpa



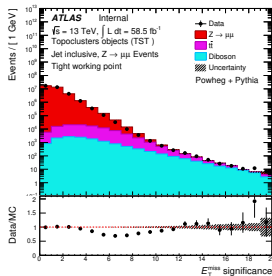
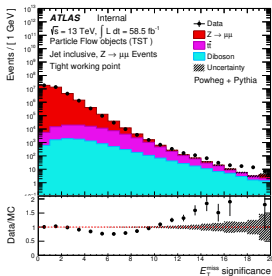
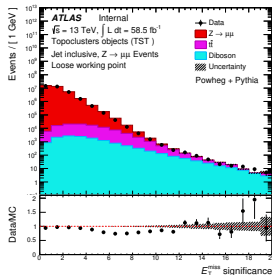
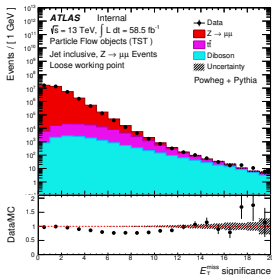
E_T^{miss} -significance distribution $Z \rightarrow \mu\mu$ events



E_T^{miss} -significance distribution

$Z \rightarrow \mu\mu$ events, Powheg+Pythia8

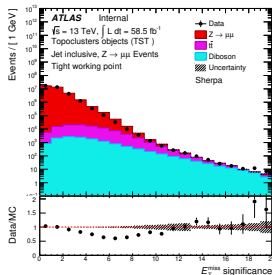
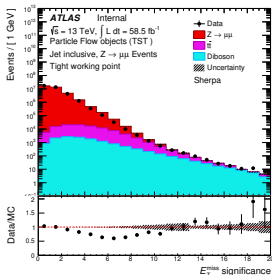
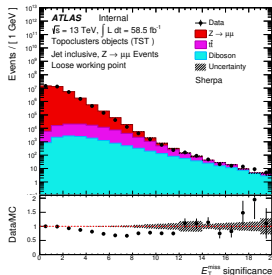
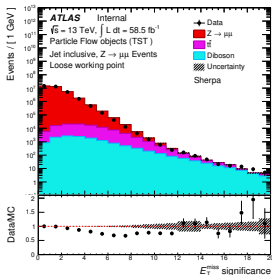
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E_T^{miss} -significance distribution

$Z \rightarrow \mu\mu$ events, Sherpa

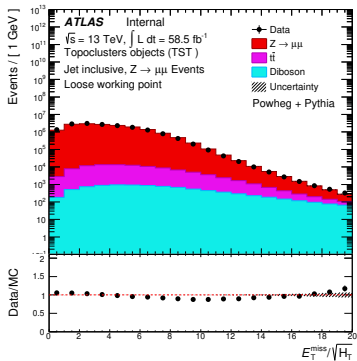
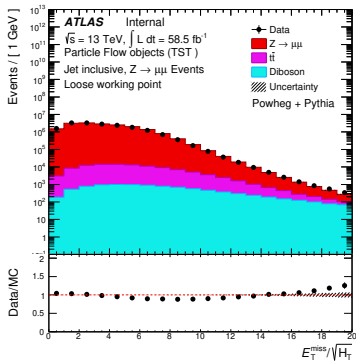
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E_T^{miss} -significance distribution

$Z \rightarrow \mu\mu$ events

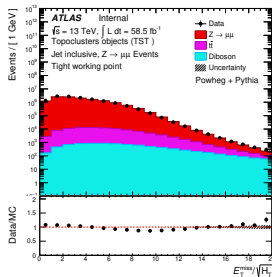
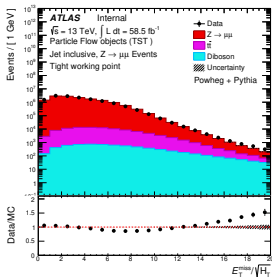
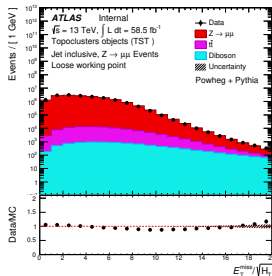
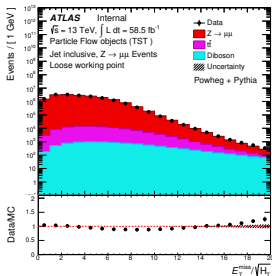
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E_T^{miss} -significance distribution

$Z \rightarrow \mu\mu$ events, Powheg+Pythia8

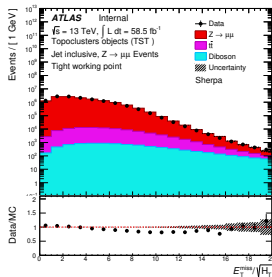
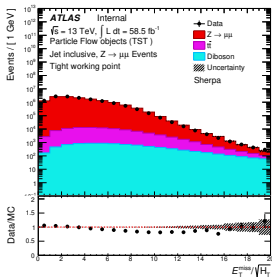
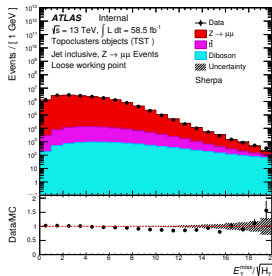
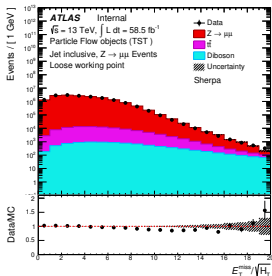
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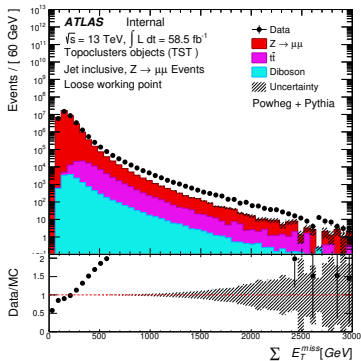
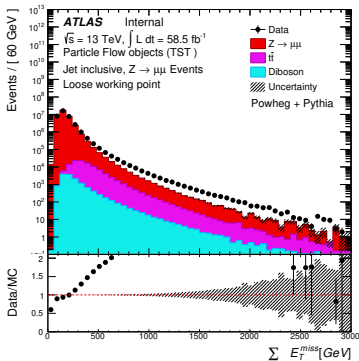
E_T^{miss} -significance distribution

$Z \rightarrow \mu\mu$ events, Sherpa

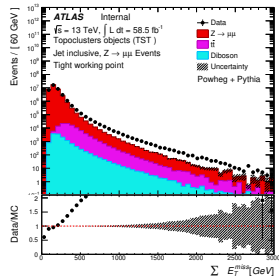
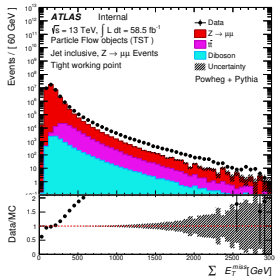
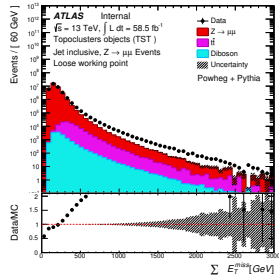
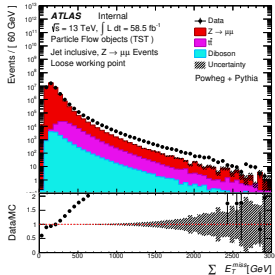
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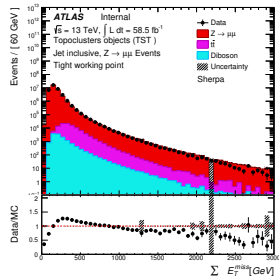
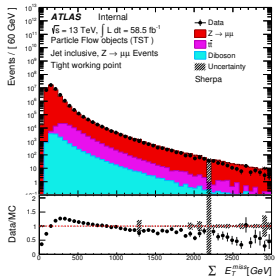
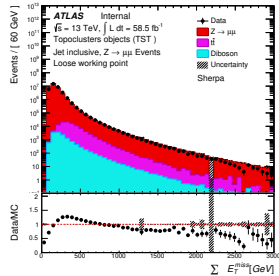
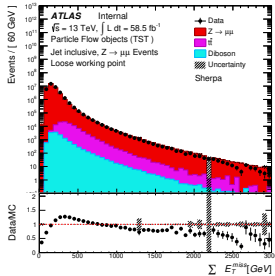
$\sum_{Z \rightarrow \mu\mu} E_T$ distribution



$\sum E_T$ distribution $Z \rightarrow \mu\mu$ events, Powheg+Pythia8



$\sum_{Z \rightarrow \mu\mu \text{ events, Sherpa}} E_T$ distribution



- ☐ Showed a comparison between the Loose and Tight MET working points;
- ☐ Observes small difference between Loose and Tight MET working points;

Working ...

- Find a better way to do the comparison
- Try to get the comparison for Run2
- Include the Tighter MET working point.



Thank you!

