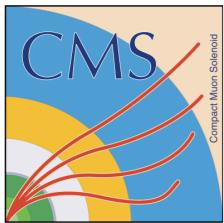


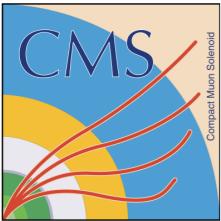
1. Statistical uncertainties + robustness of the fit
2. Systematic uncertainties from the variables
3. Error on the extrapolation (on the assumed correlation)
4. Contamination from other backgrounds and signal



Statistical uncertainties + robustness of the fit

- Error propagation for the fit parameters
- Number of events in background region D
- Robustness of the fit:
 - Shifting the bins in the control region for the fit
 - Shifting the bins in region D
 - changing the bin-size

⇒Final plots and numbers are on the way



Systematic uncertainties from the variables

- Scaling variables in the selection with $1-\sigma$ uncertainties:
 - Jet Energy Scale $\pm 5\%$
 - Lepton isolation
 - $\min \Delta\varphi, \text{MPT}$
 - more??

⇒ Result plots should show the $1-\sigma$ bands binned in MHT?

⇒ These plots will be done in data as well

steeply falling QCD spectrum will be influenced a lot by a shift
in JES!

Error on the extrapolation

- For each pair we assume a (no) correlation
 - the correlation is an approximation, ignoring minor effects
 - we cannot prove it to exist in the signal region in data

⇒ We need to use MC to get an estimate of this error

Has to be done for all variables / more variables allow cross checks:

MET-min $\Delta\varphi$

MET-MPT

MET-Hemispheres?

Should we try to smear a MC QCD sample to study the influence of jet resolution on the MET-min $\Delta\varphi$ correlation?