

Shape systematics check for $A \rightarrow Zh \rightarrow \ell\ell b\bar{b}$ analysis

Stefano Lacaprara, Mia Tosi, Alberto Zucchetta

INFN Padova

no meeting,
PD, 1 August 2014



Intro



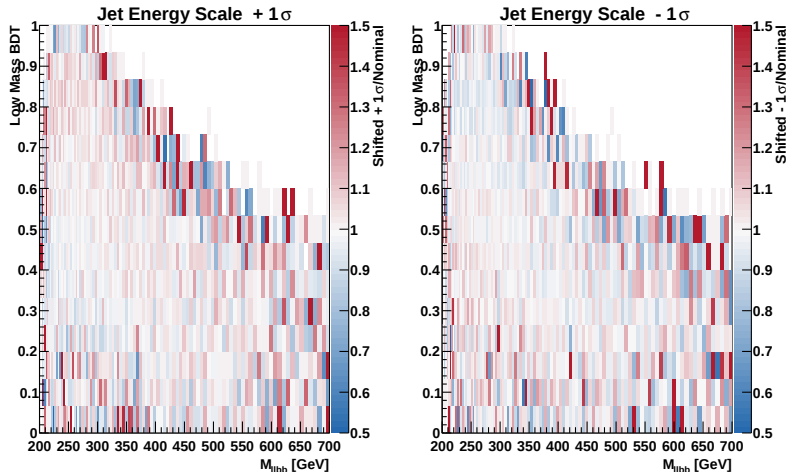
2-dimensional (BDT vs $M_{\ell\ell bb}$) ratio plot for all shape systematics.
 $+1\sigma/\text{nominal}$ (left) and $-1\sigma/\text{nominal}$ (right)

Typical datacard:

Name	type
CMS_scale_j	shape
CMS_res_j	shape
CMS_eff_b	shape
CMS_scale_q2	shape
CMS_ash_reweight	shape
...	lnN
MC statistics	
CMS_stat_225_Z0b_bin0	shape
CMS_stat_225_Z0b_bin1	shape
CMS_stat_225_Z0b_bin2	shape
CMS_stat_225_Z0b_bin3	shape
...	

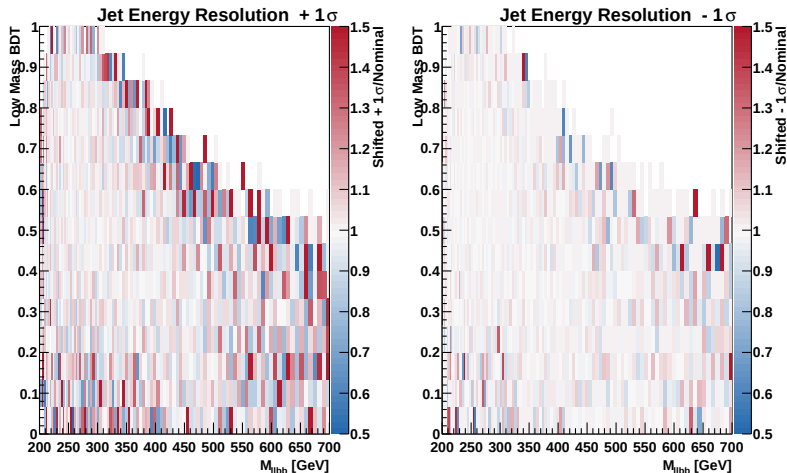


Ratio LowMass2D JES CMS_scale_j



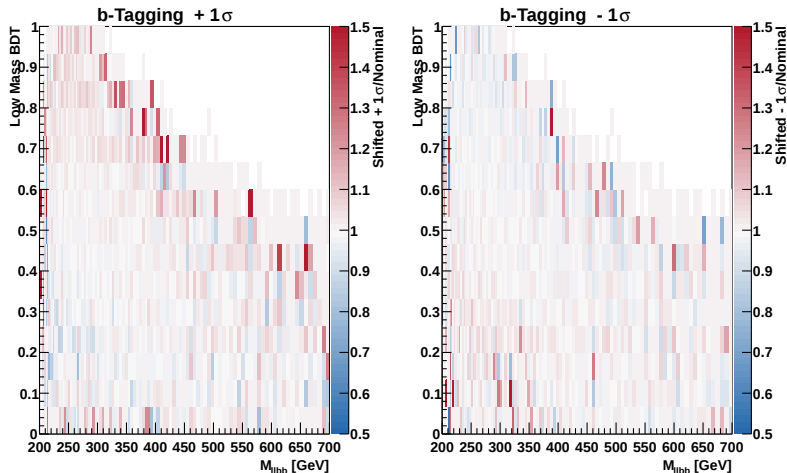


Ratio LowMass2D JER CMS_res_j



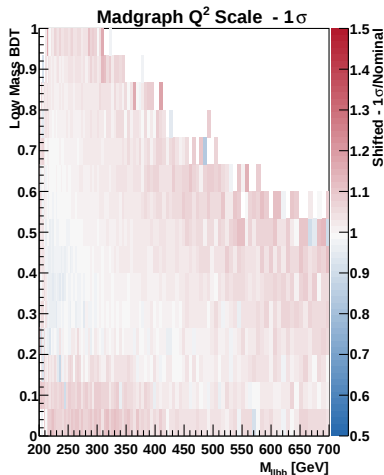
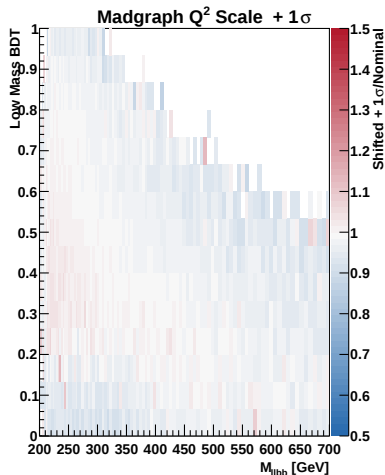


Ratio LowMass2D CSV CMS_eff_b



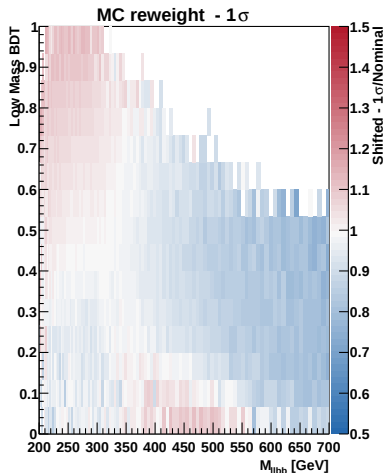
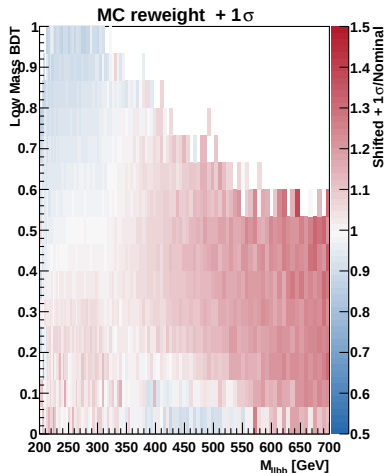


Ratio LowMass2D Q2Scale CMS_scale_q2



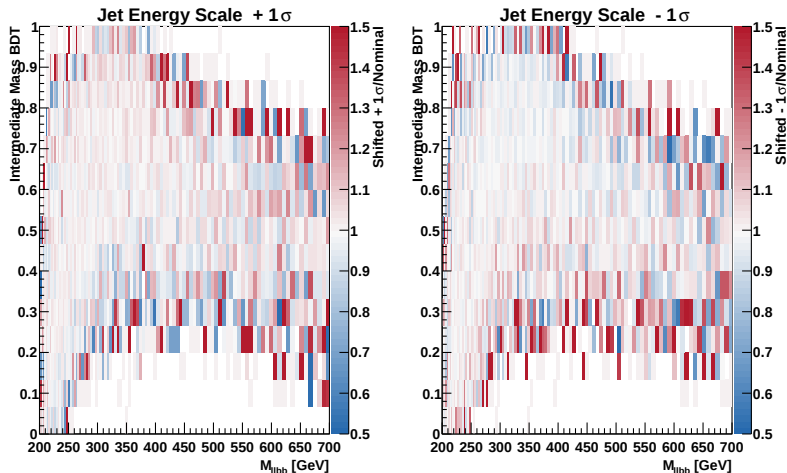


Ratio LowMass2D ReWeight CMS_azh_reweight



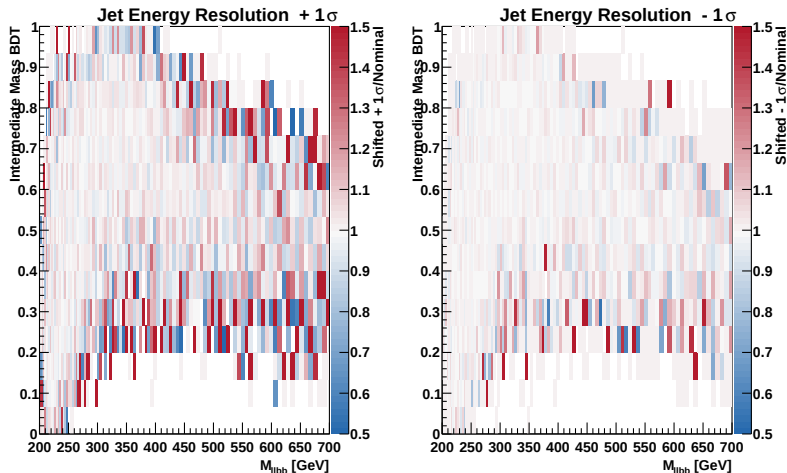


Ratio IntMass2D JES CMS_scale_j



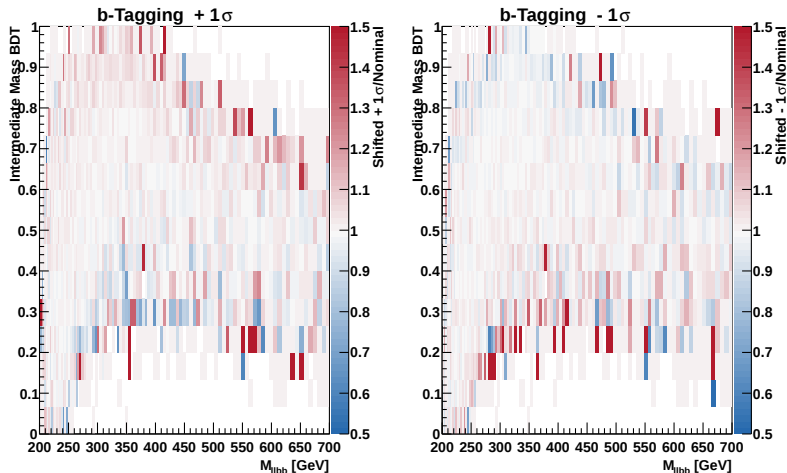


Ratio IntMass2D JER CMS_res_j



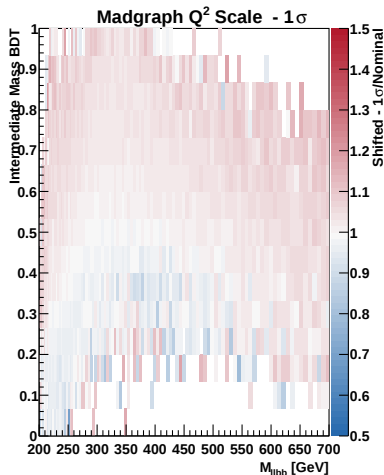
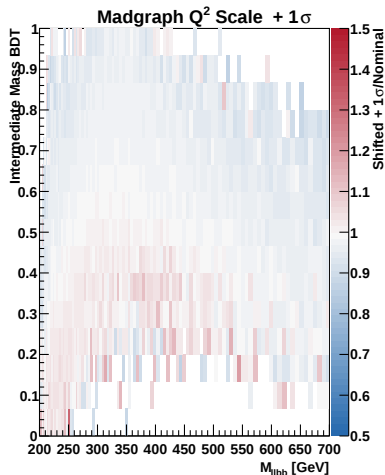


Ratio IntMass2D CSV CMS_eff_b



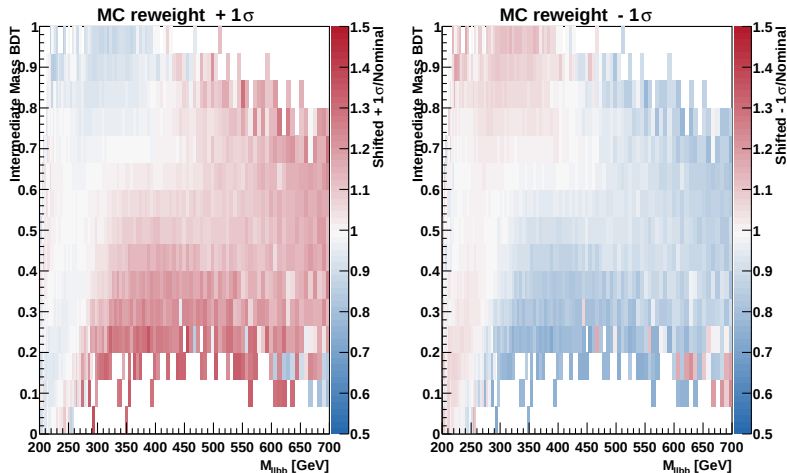


Ratio IntMass2D Q2Scale CMS_scale_q2



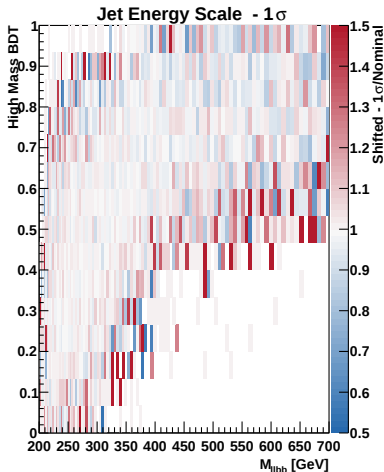
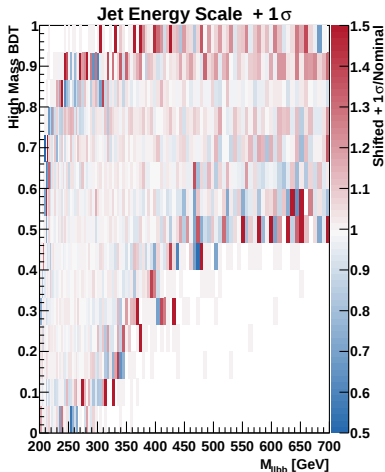


Ratio IntMass2D ReWeight CMS_ahz_reweight



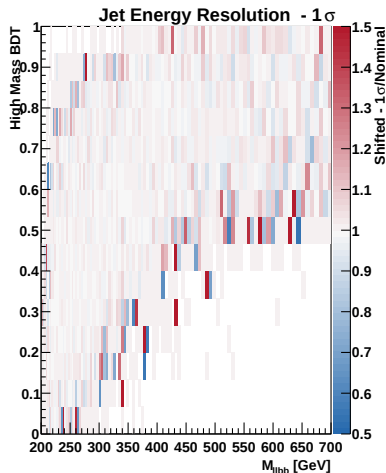
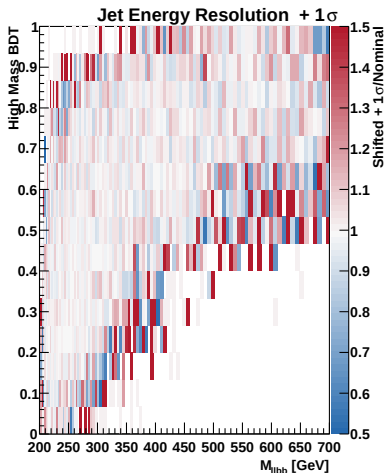


Ratio HighMass2D JES CMS_scale_j



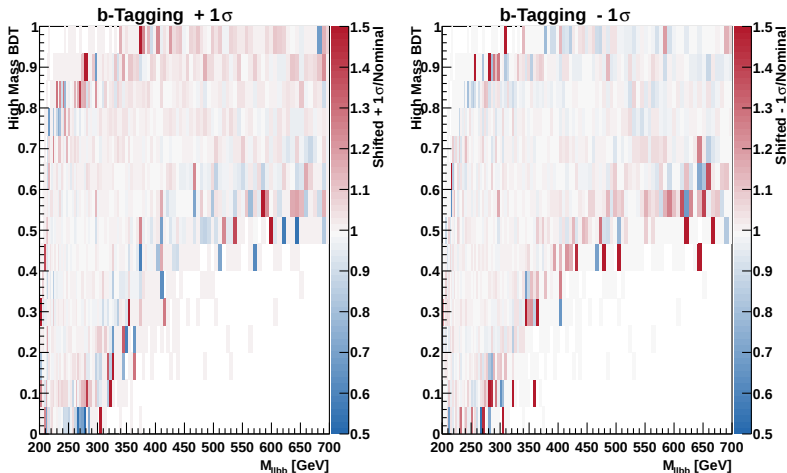


Ratio HighMass2D JER CMS_res_j



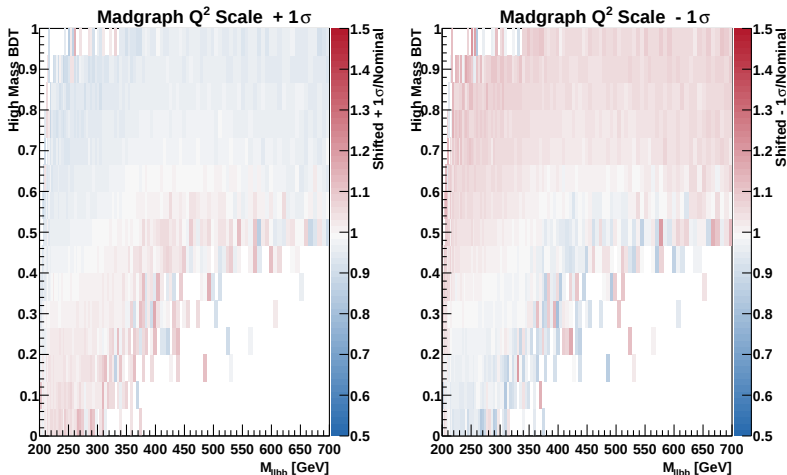


Ratio HighMass2D CSV CMS_eff_b





Ratio HighMass2D Q2Scale CMS_scale_q2





Ratio HighMass2D ReWeight CMS_ahz_reweight

