

Systematic Uncertainties for SM Htt

Theoretical and Background Processes

Theoretical

Theoretical	DataCard Name	Systematic Type
pdf_qqbar	pdf_qqbar	Norm
pdf_gg	pdf_gg	Norm
UEPS	UEPS	Norm
QCDScale ggH	QCDscale_ggH2in	Norm/Shape
QCDScale qqH	QCDscale_qqH	Norm/Shape
QCDScale VH	QCDscale_VH	Norm/Shape
QCDScale qqHVBF	QCDscale_qqHVBF	Norm/Shape

BKGD

BKGD Process	DataCard Name	Systematic Type
Z->TauTau	CMS_htt_zttNorm_13TeV	Norm
ttBar	CMS_htt_ttbarNorm_13TeV	Norm
VV	CMS_htt_DiBosonNorm_13TeV	Norm

Energy Scale and ID/Extrapolation

Energy Scale

Energy Scale	DataCard Name	Systematic Type
tau	CMS_scale_t_mutau_13TeV	shape
muon	—	—
electron	CMS_scale_e_emu_13TeV	shape only for emu channel
jet	CMS_scale_j_13TeV	shape
met	CMS_htt_scale_met_13TeV	Norm
tau→lepton fake	CMS_htt_TauFakeLep_mutau_13TeV	Norm/Shape

Other

Other	DataCard Name	Systematic Type
ZLeptonFakeTau	CMS_htt_ZLeptonFakeTau_mutau_13TeV	Norm
ZJetFakeTau	CMS_htt_ZJetFakeTau_mutau_13TeV	Norm
Tau Trigger	CMS_trigger_t_mutau_13TeV	Norm
Tau ID	CMS_eff_t_mutau_13TeV	Norm
Lumi	lumi_13TeV	Norm
W PT Reweighting	CMS_W_pt_reweighting_13TeV	Shape
Z+Jets Reweighting	CMS_ZJets_reweighting_13TeV	Shape
ttbar reweighting	CMS_top_pt_reweighting_13TeV	Shape
W Norm	CMS_htt_WNorm_mutau_13TeV	Norm
QCD	CMS_htt_QCDSyst_mutau_13TeV	Norm/Shape
QCD Low Mass SS/OS	CMS_htt_QCD_OSoverSS_mutau_13TeV	Norm/Shape