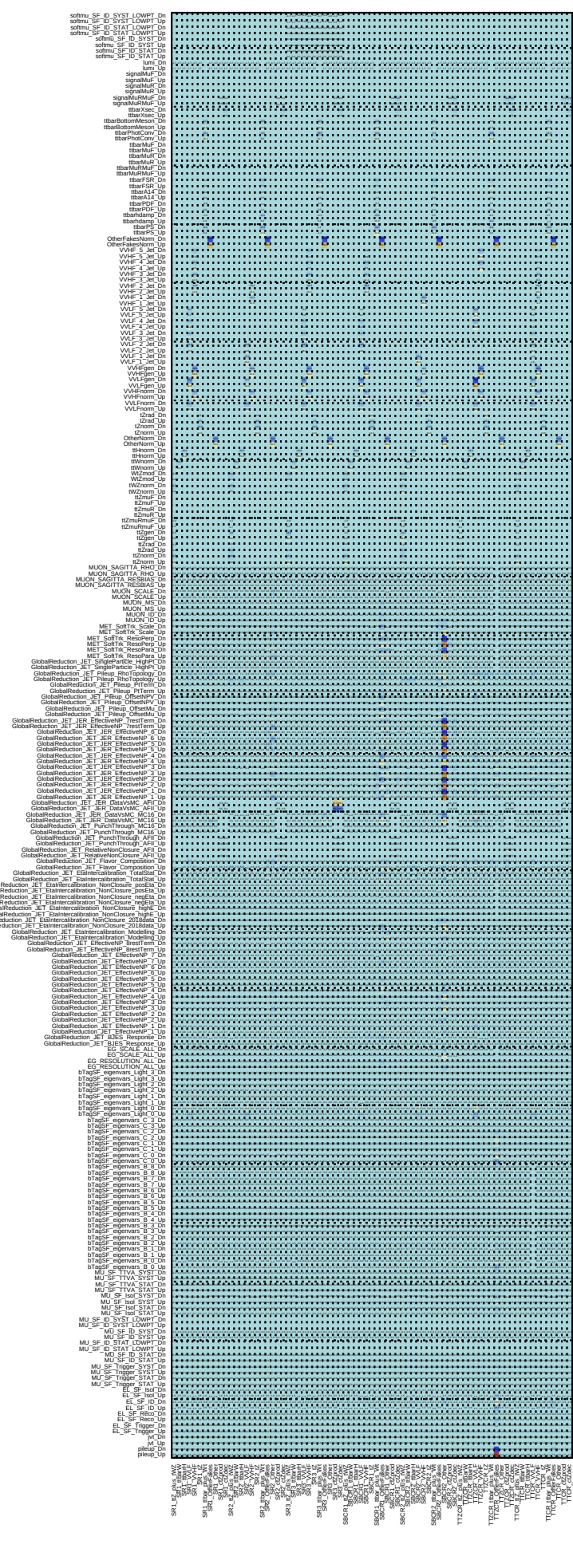
softmu_SF_ID_SYST_LOWPT_Dn
softmu_SF_ID_SYST_LOWPT_Up
softmu_SF_ID_STAT_LOWPT_Dn
softmu_SF_ID_STAT_LOWPT_Up
softmu_SF_ID_SYST_Dn
softmu_SF_ID_SYST_Up
softmu_SF_ID_STAT_Dn
softmu_SF_ID_STAT_Up
lumi_Dn
lumi_Up
signalMuF_Dn
signalMuF_Up
signalMuR_Dn
signalMuR_Up
signalMuRMuF_Dn
signalMuRMuF_Up
ttbarXsec_Dn
ttbarXsec_Up
ttbarBottomMeson_Dn
ttbarBottomMeson_Up
ttbarPhotConv_Dn
ttbarPhotConv_Up
ttbarMuF_Dn
ttbarMuF_Up
ttbarMuR_Dn
ttbarMuR_Up
ttbarMuRMuF_Dn
ttbarMuRMuF_Up
ttbarFSR_Dn
ttbarFSR_Up
ttbarA14_Dn
ttbarA14_Up
ttbarPDF_Dn
ttbarPDF_Up
ttbarhdamp_Dn
ttbarhdamp_Up
ttbarPS_Dn
ttbarPS_Up
OtherFakesNorm_Dn
OtherFakesNorm_Up
VVHF_5_JeC_Dn
VVHF_5_JeC_Up
VVHF_4_JeC_Dn
VVHF_4_JeC_Up
VVHF_3_JeC_Dn
VVHF_3_JeC_Up
VVHF_2_JeC_Dn
VVHF_2_JeC_Up
VVHF_1_JeC_Dn
VVHF_1_JeC_Up
VVLF_5_JeC_Dn
VVLF_5_JeC_Up
VVLF_4_JeC_Dn
VVLF_4_JeC_Up
VVLF_3_JeC_Dn
VVLF_3_JeC_Up
VVLF_2_JeC_Dn
VVLF_2_JeC_Up
VVLF_1_JeC_Dn
VVLF_1_JeC_Up
VVHFgen_Dn
VVHFgen_Up
VVLFgen_Dn
VVLFgen_Up
VVHFnorm_Dn
VVHFnorm_Up
VVLFnorm_Dn
VVLFnorm_Up
tZrad_Dn
tZrad_Up
tZnorm_Dn
tZnorm_Up
OtherNorm_Dn
OtherNorm_Up
ttHnorm_Dn
ttHnorm_Up
ttWnorm_Dn
ttWnorm_Up
WZmod_Dn
WZmod_Up
tWZnorm_Dn
tWZnorm_Up
ttZmuF_Dn
ttZmuF_Up
ttZmuR_Dn
ttZmuR_Up
ttZmuRmuF_Dn
ttZmuRmuF_Up
ttZgen_Dn
ttZgen_Up
tZrad_Dn
tZrad_Up
tZnorm_Dn
tZnorm_Up
MUON_SAGITTA_RHO_Dn
MUON_SAGITTA_RHO_Up
MUON_SAGITTA_RESBIAS_Dn
MUON_SAGITTA_RESBIAS_Up
MUON_SCALE_Dn
MUON_SCALE_Up
MUON_MS_Dn
MUON_MS_Up
MUON_ID_Dn
MUON_ID_Up
MET_SoftTrk_Scale_Dn
MET_SoftTrk_Scale_Up
MET_SoftTrk_ResoPerp_Dn
MET_SoftTrk_ResoPerp_Up
MET_SoftTrk_ResoPara_Dn
MET_SoftTrk_ResoPara_Up
GlobalReduction_JET_SingleParticle_HighPt_Dn
GlobalReduction_JET_SingleParticle_HighPt_Up
GlobalReduction_JET_Pileup_RhoTopology_Dn
GlobalReduction_JET_Pileup_RhoTopology_Up
GlobalReduction_JET_Pileup_PtTerm_Dn
GlobalReduction_JET_Pileup_PtTerm_Up
GlobalReduction_JET_Pileup_OffsetNPV_Dn
GlobalReduction_JET_Pileup_OffsetNPV_Up
GlobalReduction_JET_Pileup_OffsetMu_Dn
GlobalReduction_JET_Pileup_OffsetMu_Up
GlobalReduction_JET_JER_EffectiveNP_7restTerm_Dn
GlobalReduction_JET_JER_EffectiveNP_7restTerm_Up
GlobalReduction_JET_JER_EffectiveNP_6_Dn
GlobalReduction_JET_JER_EffectiveNP_6_Up
GlobalReduction_JET_JER_EffectiveNP_5_Dn
GlobalReduction_JET_JER_EffectiveNP_5_Up
GlobalReduction_JET_JER_EffectiveNP_4_Dn
GlobalReduction_JET_JER_EffectiveNP_4_Up
GlobalReduction_JET_JER_EffectiveNP_3_Dn
GlobalReduction_JET_JER_EffectiveNP_3_Up
GlobalReduction_JET_JER_EffectiveNP_2_Dn
GlobalReduction_JET_JER_EffectiveNP_2_Up
GlobalReduction_JET_JER_EffectiveNP_1_Dn
GlobalReduction_JET_JER_EffectiveNP_1_Up
GlobalReduction_JET_JER_DataVsMC_AFII_Dn
GlobalReduction_JET_JER_DataVsMC_AFII_Up
GlobalReduction_JET_JER_DataVsMC_MC16_Dn
GlobalReduction_JET_JER_DataVsMC_MC16_Up
GlobalReduction_JET_PileInTrough_MC16_Dn
GlobalReduction_JET_PunchThrough_MC16_Up
GlobalReduction_JET_PunchThrough_AFII_Dn
GlobalReduction_JET_PunchThrough_AFII_Up
GlobalReduction_JET_RelativeNonClosure_AFII_Dn
GlobalReduction_JET_RelativeNonClosure_AFII_Up
GlobalReduction_JET_Flavor_Composition_Dn
GlobalReduction_JET_Flavor_Composition_Up
GlobalReduction_JET_EtaIntercalibration_TotalStat_Dn
GlobalReduction_JET_EtaIntercalibration_TotalStat_Up
Reduction_JET_EtaIntercalibration_NonClosure_posEta_Dn
Reduction_JET_EtaIntercalibration_NonClosure_posEta_Up
Reduction_JET_EtaIntercalibration_NonClosure_negEta_Dn
Reduction_JET_EtaIntercalibration_NonClosure_negEta_Up
aReduction_JET_EtaIntercalibration_NonClosure_highE_Dn
aReduction_JET_EtaIntercalibration_NonClosure_highE_Up
duction_JET_EtaIntercalibration_NonClosure_2018data_Dn
duction_JET_EtaIntercalibration_NonClosure_2018data_Up
GlobalReduction_JET_EtaIntercalibration_Modelling_Dn
GlobalReduction_JET_EtaIntercalibration_Modelling_Up
GlobalReduction_JET_EffectiveNP_8restTerm_Dn
GlobalReduction_JET_EffectiveNP_8restTerm_Up
GlobalReduction_JET_EffectiveNP_7_Dn
GlobalReduction_JET_EffectiveNP_7_Up
GlobalReduction_JET_EffectiveNP_6_Dn
GlobalReduction_JET_EffectiveNP_6_Up
GlobalReduction_JET_EffectiveNP_5_Dn
GlobalReduction_JET_EffectiveNP_5_Up
GlobalReduction_JET_EffectiveNP_4_Dn
GlobalReduction_JET_EffectiveNP_4_Up
GlobalReduction_JET_EffectiveNP_3_Dn
GlobalReduction_JET_EffectiveNP_3_Up
GlobalReduction_JET_EffectiveNP_2_Dn
GlobalReduction_JET_EffectiveNP_2_Up
GlobalReduction_JET_EffectiveNP_1_Dn
GlobalReduction_JET_EffectiveNP_1_Up
GlobalReduction_JET_BJES_Response_Dn
GlobalReduction_JET_BJES_Response_Up
EG_SCALE_ALL_Dn
EG_SCALE_ALL_Up
EG_RESOLUTION_ALL_Dn
EG_RESOLUTION_ALL_Up
bTagSF_eigenvars_Light_3_Dn
bTagSF_eigenvars_Light_3_Up
bTagSF_eigenvars_Light_2_Dn
bTagSF_eigenvars_Light_2_Up
bTagSF_eigenvars_Light_1_Dn
bTagSF_eigenvars_Light_1_Up
bTagSF_eigenvars_Light_0_Dn
bTagSF_eigenvars_Light_0_Up
bTagSF_eigenvars_C_3_Dn
bTagSF_eigenvars_C_3_Up
bTagSF_eigenvars_C_2_Dn
bTagSF_eigenvars_C_2_Up
bTagSF_eigenvars_C_1_Dn
bTagSF_eigenvars_C_1_Up
bTagSF_eigenvars_C_0_Dn
bTagSF_eigenvars_C_0_Up
bTagSF_eigenvars_B_8_Dn
bTagSF_eigenvars_B_8_Up
bTagSF_eigenvars_B_7_Dn
bTagSF_eigenvars_B_7_Up
bTagSF_eigenvars_B_6_Dn
bTagSF_eigenvars_B_6_Up
bTagSF_eigenvars_B_5_Dn
bTagSF_eigenvars_B_5_Up
bTagSF_eigenvars_B_4_Dn
bTagSF_eigenvars_B_4_Up
bTagSF_eigenvars_B_3_Dn
bTagSF_eigenvars_B_3_Up
bTagSF_eigenvars_B_2_Dn
bTagSF_eigenvars_B_2_Up
bTagSF_eigenvars_B_1_Dn
bTagSF_eigenvars_B_1_Up
bTagSF_eigenvars_B_0_Dn
bTagSF_eigenvars_B_0_Up
MU_SF_TTVA_STAT_Dn
MU_SF_TTVA_STAT_Up
MU_SF_TTVA_SYST_Dn
MU_SF_TTVA_SYST_Up
MU_SF_Isol_SYST_Dn
MU_SF_Isol_SYST_Up
MU_SF_Isol_STAT_Dn
MU_SF_Isol_STAT_Up
MU_SF_ID_SYST_LOWPT_Dn
MU_SF_ID_SYST_LOWPT_Up
MU_SF_ID_SYST_Dn
MU_SF_ID_SYST_Up
MU_SF_ID_STAT_LOWPT_Dn
MU_SF_ID_STAT_LOWPT_Up
MU_SF_ID_STAT_Dn
MU_SF_ID_STAT_Up
MU_SF_Trigger_SYST_Dn
MU_SF_Trigger_SYST_Up
MU_SF_Trigger_STAT_Dn
MU_SF_Trigger_STAT_Up
EL_SF_Isol_Dn
EL_SF_Isol_Up
EL_SF_ID_Dn
EL_SF_ID_Up
EL_SF_Reco_Dn
EL_SF_Reco_Up
EL_SF_Trigger_Dn
EL_SF_Trigger_Up
jvt_Dn
jvt_Up
pileup_Dn
pileup_Up
SR1_2J_plus_MV
SR1_2J_plus_BDT
SR1_2J_VVHF
SR1_2J_VVLF
SR1_2J_ttbar
SR1_2J_Other
SR2_2J_plus_MV
SR2_2J_plus_BDT
SR2_2J_VVHF
SR2_2J_VVLF
SR2_2J_ttbar
SR2_2J_Other
SR3_2J_plus_MV
SR3_2J_plus_BDT
SR3_2J_VVHF
SR3_2J_VVLF
SR3_2J_ttbar
SR3_2J_Other
SBCR_1J_plus_MV
SBCR_1J_plus_BDT
SBCR_1J_VVHF
SBCR_1J_VVLF
SBCR_1J_ttbar
SBCR_1J_Other
SBCR_2J_plus_MV
SBCR_2J_plus_BDT
SBCR_2J_VVHF
SBCR_2J_VVLF
SBCR_2J_ttbar
SBCR_2J_Other
TTZCR_1J_plus_MV
TTZCR_1J_plus_BDT
TTZCR_1J_VVHF
TTZCR_1J_VVLF
TTZCR_1J_ttbar
TTZCR_1J_Other
TTZCR_2J_plus_MV
TTZCR_2J_plus_BDT
TTZCR_2J_VVHF
TTZCR_2J_VVLF
TTZCR_2J_ttbar
TTZCR_2J_Other
TTZZCR_1J_plus_MV
TTZZCR_1J_plus_BDT
TTZZCR_1J_VVHF
TTZZCR_1J_VVLF
TTZZCR_1J_ttbar
TTZZCR_1J_Other
TTZZCR_2J_plus_MV
TTZZCR_2J_plus_BDT
TTZZCR_2J_VVHF
TTZZCR_2J_VVLF
TTZZCR_2J_ttbar
TTZZCR_2J_Other