

Parameter	initial value and error	fitted value and error
alpha_MUON_Eff_stat	0.00 ± 1.00	-0.00 ± 0.79
alpha_EG_TrigEff	0.00 ± 1.00	0.00 ± 0.79
alpha_btag_Extra	0.00 ± 1.00	-0.00 ± 0.79
alpha_MUON_MS	0.00 ± 1.00	0.01 ± 0.77
alpha_EG_SCALE_ALL	0.00 ± 1.00	-0.00 ± 0.77
alpha_MUON_ID	0.00 ± 1.00	0.01 ± 0.79
alpha_muR_muF-Diboson	0.00 ± 1.00	0.02 ± 0.64
alpha_MUON_Trig_stat	0.00 ± 1.00	0.00 ± 0.79
alpha_EG_RESOLUTION_ALL	0.00 ± 1.00	-0.03 ± 0.84
alpha_MUON_Trig_sys	0.00 ± 1.00	-0.04 ± 0.90
alpha_EG_SCALE_AF2	0.00 ± 1.00	0.00 ± 0.79
alpha_MUON_Eff_BadMuon_stat	0.00 ± 1.00	0.00 ± 0.79
alpha_JVT	0.00 ± 1.00	-0.02 ± 0.81
alpha_MatrixElement-Top2L	0.00 ± 1.00	0.29 ± 0.76
alpha_MUON_Eff_Iso_stat	0.00 ± 1.00	0.00 ± 0.79
alpha_EG_Eff	0.00 ± 1.00	-0.02 ± 0.82
alpha_JET_Flavor_Response	0.00 ± 1.00	0.43 ± 7.28
alpha_btag_ExtraFromCharm	0.00 ± 1.00	0.00 ± 0.79
alpha_MUON_TTVA_stat	0.00 ± 1.00	-0.00 ± 0.79
alpha_MUON_Eff_Iso_sys	0.00 ± 1.00	-0.00 ± 0.79
alpha_JER_DataVsMC	0.00 ± 1.00	0.14 ± 1.56
alpha_JER_DataVsMC_AFII	0.00 ± 1.00	0.00 ± 0.79
alpha_fakesSyst	0.00 ± 1.00	-0.10 ± 0.85
gamma_stat_tW2L_CRttZ_cuts_bin_0	1.00 ± 0.03	1.00 ± 0.02
alpha_PartonShower-Top2L	0.00 ± 1.00	0.15 ± 0.50
alpha_JET_EtaInt_negEta	0.00 ± 1.00	0.00 ± 0.78
alpha_btag_BT	0.00 ± 1.00	-0.02 ± 0.82
alpha_JER_EffectiveNP_7restTerm	0.00 ± 1.00	0.38 ± 0.87
alpha_JES_Group1	0.00 ± 1.00	-0.42 ± 3.91
alpha_JES_Group3	0.00 ± 1.00	-0.01 ± 0.79
alpha_JES_Group2	0.00 ± 1.00	-0.46 ± 6.99
alpha_singletopSyst	0.00 ± 1.00	0.32 ± 5.28
alpha_fJVT	0.00 ± 1.00	0.00 ± 0.79
alpha_MUON_Eff_BadMuon_sys	0.00 ± 1.00	0.00 ± 0.79
alpha_ISR-Top2L	0.00 ± 1.00	0.05 ± 0.26
alpha_EG_Trig	0.00 ± 1.00	0.00 ± 0.79
Lumi	1.00 ± 0.02	1.00 ± 0.01
alpha_JET_EtaInt_highE	0.00 ± 1.00	-0.00 ± 0.79
alpha_FSR-Top2L	0.00 ± 1.00	0.03 ± 0.81
mu_tt_2L	1.00 ± 0.00	0.98 ± 0.03
Pile-up	0.00 ± 1.00	0.05 ± 0.98
alpha_MUON_TTVA_sys	0.00 ± 1.00	-0.00 ± 0.79
mu_dib	1.00 ± 0.00	0.72 ± 0.19
alpha_MUON_Eff_sys	0.00 ± 1.00	-0.00 ± 0.79
alpha_muR_muF_ttV	0.00 ± 1.00	0.04 ± 0.65
alpha_MET_SoftTrk_ResoPerp	0.00 ± 1.00	-0.03 ± 0.84
alpha_EG_Reco	0.00 ± 1.00	-0.00 ± 0.79
alpha_btag_CT	0.00 ± 1.00	0.00 ± 0.79
mu_ttV	1.00 ± 0.00	0.85 ± 0.34
gamma_stat_tW2L_CRtt_cuts_bin_0	1.00 ± 0.01	1.00 ± 0.01
alpha_MUON_SCALE	0.00 ± 1.00	-0.01 ± 0.77
alpha_JET_RelNonClos_AFII	0.00 ± 1.00	0.00 ± 0.79
MC statistics SR2L bin 0	1.00 ± 0.08	1.02 ± 0.17
alpha_JET_EtaInt_posEta	0.00 ± 1.00	-0.00 ± 0.79
alpha_MUON_Eff_sys_lowpt	0.00 ± 1.00	0.00 ± 0.79
alpha_btag_LightT	0.00 ± 1.00	0.00 ± 0.79
alpha_MET_SoftTrk	0.00 ± 1.00	-0.02 ± 0.80
alpha_MUON_Eff_stat_lowpt	0.00 ± 1.00	0.00 ± 0.79
alpha_MET_SoftTrk_ResoPara	0.00 ± 1.00	-0.02 ± 0.82
alpha_JER_EffectiveNP_4	0.00 ± 1.00	0.32 ± 1.34
alpha_JER_EffectiveNP_5	0.00 ± 1.00	0.40 ± 0.77
alpha_JER_EffectiveNP_6	0.00 ± 1.00	0.25 ± 2.48
gamma_stat_tW2L_CRWZ_cuts_bin_0	1.00 ± 0.04	1.00 ± 0.03
alpha_JER_EffectiveNP_1	0.00 ± 1.00	0.55 ± 1.26
alpha_JER_EffectiveNP_2	0.00 ± 1.00	0.50 ± 0.87
alpha_JER_EffectiveNP_3	0.00 ± 1.00	0.57 ± 1.56

Table 1: Floating fit parameters for the analysis involving signal region SR2L, before (left) and after (right) the background-only fit. The quoted fit errors come from HESSE.