

FR Name	Default	LHA block	LHA code	Description
tb	0.1	LRSMINPUTS	1	Bidoublet VEVs ratio $t_\beta$
alp	0.1	LRSMINPUTS	2	Bidoublet VEV $v_2$ phase $\alpha$
thetamix	0.01	LRSMINPUTS	3	$h - \Re\Delta_R$ mixing angle $\theta$
etamix	0.00001	LRSMINPUTS	4	$H - \Re\Delta_R$ mixing angle $\eta$
phimix	0	LRSMINPUTS	5	$h - \Re\phi_{20}$ mixing angle $\phi$
r4	0	LRSMINPUTS	6	$\rho_4$ scalar coupling
zetaLR	1	LRSMINPUTS	7	Ratio of Left/Right gauge couplings
aS	0.1184	SMINPUTS	1	Strong coupling
gw	0.65	SMINPUTS	2	Weak coupling $g_L$
aEWM1	127.9	SMINPUTS	3	Inverse of electromagnetic coupling
Gf	11.66/TeV <sup>2</sup>	SMINPUTS	4	Fermi coupling
MU_R	91.19 GeV	LOOP	1	NLO renormalization scale
CKMlam	0.2245	CKMBLOCK	1	Left CKM mixing entries
CKMA	0.836	CKMBLOCK	2	
CKMrho	0.122	CKMBLOCK	3	
CKMeta	0.355	CKMBLOCK	4	
CKMRs12	0.2245	CKMBLOCK	5	Right CKM mixing entries
CKMRs13	0.02	CKMBLOCK	6	
CKMRs23	0.02	CKMBLOCK	7	
CKMRdel	0.1	CKMBLOCK	8	
PMNSLs12	0.544	PMNSBLOCK	1	Left PMNS mixing entries
PMNSLs23	0.651	PMNSBLOCK	2	
PMNSLs13	0.146	PMNSBLOCK	3	
PMNSLdel	4.335	PMNSBLOCK	4	
PMNSRs12	0.544	PMNSBLOCK	11	Right PMNS mixing entries
PMNSRs23	0.651	PMNSBLOCK	12	
PMNSRs13	0.146	PMNSBLOCK	13	
PMNSRdel	4.335	PMNSBLOCK	14	
PMNSLphi1	0	PMNSBLOCK	15	Left Majorana CP phases
PMNSLphi2	0	PMNSBLOCK	16	
PMNSRphi1	0	PMNSBLOCK	17	Right Majorana CP phases
PMNSRphi2	0	PMNSBLOCK	18	
PMNSRphi3	0	PMNSBLOCK	19	
MNUO	0.05 eV	PMNSBLOCK	20	Lightest neutrino mass
DMsol	$7.41 \times 10^{-5} \text{ eV}^2$	PMNSBLOCK	21	$\Delta m_{sol}^2$
DMatm	$2.51 \times 10^{-3} \text{ eV}^2$	PMNSBLOCK	22	$\Delta m_{atm}^2$
NUH	1	PMNSBLOCK	23	Neutrino Hierarchy ( $\geq 0$ Normal, $< 0$ Inverted)

TABLE IV. All external parameters (other than particle masses).