# Basis flavio (EFT WET)

Basis used by the flavio package. Neutrinos are in the flavour basis.

## Sectors

The effective Lagrangian is defined as

$$\mathcal{L}_{\text{eff}} = -\mathcal{H}_{\text{eff}} = \sum_{O_i = O_i^{\dagger}} C_i O_i + \sum_{O_i \neq O_i^{\dagger}} \left( C_i O_i + C_i^* O_i^{\dagger} \right).$$

sbsb

WC name	Operator	Type
CVLL_bsbs	$(\bar{s}_L \gamma^\mu b_L)(\bar{s}_L \gamma_\mu b_L)$	С
CVRR_bsbs	$(\bar{s}_R \gamma^\mu b_R)(\bar{s}_R \gamma_\mu b_R)$	$\mathbf{C}$
CSLL_bsbs	$(\bar{s}_R b_L)(\bar{s}_R b_L)$	$\mathbf{C}$
CSRR_bsbs	$(\bar{s}_L b_R)(\bar{s}_L b_R)$	$\mathbf{C}$
CTLL_bsbs	$(\bar{s}_R \sigma^{\mu\nu} b_L)(\bar{s}_R \sigma_{\mu\nu} b_L)$	$\mathbf{C}$
CTRR_bsbs	$(\bar{s}_L \sigma^{\mu\nu} b_R)(\bar{s}_L \sigma_{\mu\nu} b_R)$	$\mathbf{C}$
CVLR_bsbs	$(\bar{s}_L \gamma^\mu b_L)(\bar{s}_R \gamma_\mu b_R)$	$\mathbf{C}$
CSLR_bsbs	$(ar{s}_R b_L)(ar{s}_L b_R)$	$\mathbf{C}$

dbdb

WC name	Operator	Type
CVLL_bdbd	$(\bar{d}_L \gamma^\mu b_L)(\bar{d}_L \gamma_\mu b_L)$	С
CVRR_bdbd	$(\bar{d}_R \gamma^\mu b_R)(\bar{d}_R \gamma_\mu b_R)$	$\mathbf{C}$
CSLL_bdbd	$(ar{d}_R b_L)(ar{d}_R b_L)$	$\mathbf{C}$
CSRR_bdbd	$(ar{d}_L b_R)(ar{d}_L b_R)$	$\mathbf{C}$
CTLL_bdbd	$(\bar{d}_R \sigma^{\mu\nu} b_L)(\bar{d}_R \sigma_{\mu\nu} b_L)$	$\mathbf{C}$
CTRR_bdbd	$(\bar{d}_L \sigma^{\mu\nu} b_R)(\bar{d}_L \sigma_{\mu\nu} b_R)$	$\mathbf{C}$
CVLR_bdbd	$(\bar{d}_L \gamma^\mu b_L)(\bar{d}_R \gamma_\mu b_R)$	$\mathbf{C}$
CSLR_bdbd	$(ar{d}_R b_L)(ar{d}_L b_R)$	С

sdsd

WC name	Operator	Type
CVLL sdsd	$(\bar{d}_L \gamma^\mu s_L)(\bar{d}_L \gamma_\mu s_L)$	$^{\rm C}$

WC name	Operator	Type
CVRR_sdsd	$(\bar{d}_R \gamma^\mu s_R)(\bar{d}_R \gamma_\mu s_R)$	С
CSLL_sdsd	$(ar{d}_R s_L)(ar{d}_R s_L)$	$\mathbf{C}$
CSRR_sdsd	$(ar{d}_L s_R)(ar{d}_L s_R)$	$\mathbf{C}$
CTLL_sdsd	$(\bar{d}_R \sigma^{\mu\nu} s_L)(\bar{d}_R \sigma_{\mu\nu} s_L)$	$\mathbf{C}$
CTRR_sdsd	$(\bar{d}_L \sigma^{\mu\nu} s_R)(\bar{d}_L \sigma_{\mu\nu} s_R)$	$\mathbf{C}$
CVLR_sdsd	$(\bar{d}_L \gamma^\mu s_L)(\bar{d}_R \gamma_\mu s_R)$	$\mathbf{C}$
CSLR_sdsd	$(ar{d}_R s_L)(ar{d}_L s_R)$	$^{\mathrm{C}}$

## cucu

WC name	Operator	Type
CVLL_ucuc	$(\bar{c}_L \gamma^\mu u_L)(\bar{c}_L \gamma_\mu u_L)$	С
CVRR_ucuc	$(\bar{c}_R \gamma^\mu u_R)(\bar{c}_R \gamma_\mu u_R)$	$\mathbf{C}$
CSLL_ucuc	$(\bar{c}_R u_L)(\bar{c}_R u_L)$	$\mathbf{C}$
CSRR_ucuc	$(\bar{c}_L u_R)(\bar{c}_L u_R)$	$^{\mathrm{C}}$
CTLL_ucuc	$(\bar{c}_R \sigma^{\mu\nu} u_L)(\bar{c}_R \sigma_{\mu\nu} u_L)$	$\mathbf{C}$
CTRR_ucuc	$(\bar{c}_L \sigma^{\mu\nu} u_R)(\bar{c}_L \sigma_{\mu\nu} u_R)$	$\mathbf{C}$
CVLR_ucuc	$(\bar{c}_L \gamma^\mu u_L)(\bar{c}_R \gamma_\mu u_R)$	$^{\mathrm{C}}$
CSLR_ucuc	$(\bar{c}_R u_L)(\bar{c}_L u_R)$	$\mathbf{C}$

## sb

WC name	Operator	Type
C9_bsee	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{e}\gamma_{\mu}e)$	$\mathbf{C}$
C9p_bsee	$rac{4 V_{-}}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16 \pi^2} (ar{s}_R \gamma^{\mu} b_R) (ar{e} \gamma_{\mu} e)$	$\mathbf{C}$
C10_bsee	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^\mu b_L)(ar{e}\gamma_\mu\gamma_5 e)$	$\mathbf{C}$
C10p_bsee	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^\mu b_R)(ar{e}\gamma_\mu\gamma_5 e)$	$\mathbf{C}$
CS_bsee	$rac{4\overset{\longleftarrow}{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Lb_R)(ar{e}e)$	$\mathbf{C}$
CSp_bsee	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Rb_L)(ar{e}e)$	$\mathbf{C}$
CP_bsee	$rac{4 \overline{G_F}}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16\pi^2} m_b(ar{s}_L b_R) (ar{e} \gamma_5 e)$	$\mathbf{C}$
CPp_bsee	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}rac{e^{2}}{16\pi^{2}}m_{b}(ar{s}_{R}b_{L})(ar{e}\gamma_{5}e)$	$\mathbf{C}$
C9_bsmumu	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^\mu b_L)(ar{\mu}\gamma_\mu\mu)$	$\mathbf{C}$
C9p_bsmumu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^\mu b_R)(ar{\mu}\gamma_\mu\mu)$	$\mathbf{C}$
C10_bsmumu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^\mu b_L)(ar{\mu}\gamma_\mu\gamma_5\mu)$	$\mathbf{C}$
C10p_bsmumu	$rac{4 \stackrel{\longleftarrow}{V_F}}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16\pi^2} (ar{s}_R \gamma^\mu b_R) (ar{\mu} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
CS_bsmumu	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_L b_R)(ar{\mu}\mu)$	$\mathbf{C}$

WC name	Operator	Type
CSp_bsmumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\mu}\mu)$	$\mathbf{C}$
CP_bsmumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_L b_R)(\bar{\mu}\gamma_5 \mu)$	$\mathbf{C}$
CPp_bsmumu	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{s}_{R}b_{L})(\bar{\mu}\gamma_{5}\mu)$	$\mathbf{C}$
C9_bstautau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^{\mu}b_L)(ar{ au}\gamma_{\mu} au)$	$\mathbf{C}$
C9p_bstautau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^{\mu}b_R)(ar{ au}\gamma_{\mu} au)$	$\mathbf{C}$
C10_bstautau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\tau}\gamma_{\mu}\gamma_5\tau)$	$\mathbf{C}$
C10p_bstautau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\tau}\gamma_{\mu}\gamma_5\tau)$	$\mathbf{C}$
CS_bstautau	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{s}_{L}b_{R})(\bar{\tau}\tau)$	$\mathbf{C}$
CSp_bstautau	$rac{4 \tilde{G}_F^2}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16 \pi^2} m_b (ar{s}_R b_L) (ar{ au}  au)$	$\mathbf{C}$
CP_bstautau	$\frac{4\tilde{Q}_{F}^{2}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{s}_{L}b_{R})(\bar{ au}\gamma_{5} au)$	$\mathbf{C}$
CPp_bstautau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}m_b(\bar{s}_R b_L)(\bar{\tau}\gamma_5  au)$	$\mathbf{C}$
C7_bs	$\frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\tau}\gamma_5\tau)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e}{16\pi^2}m_b(\bar{s}_L\sigma^{\mu\nu}b_R)F_{\mu\nu}}$	$\mathbf{C}$
C7p_bs	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e}{16\pi^2} m_b(\bar{s}_R \sigma^{\mu\nu} b_L) F_{\mu\nu}$	$\mathbf{C}$
C8_bs	$\frac{4G_F^2}{\sqrt{2}}V_{tb}V_{ts}^* \frac{g_s}{16\pi^2}m_b(\bar{s}_L\sigma^{\mu\nu}T^ab_R)G_{\mu\nu}^a$	$\mathbf{C}$
C8p_bs	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{g_s}{16\pi^2} m_b(\bar{s}_R \sigma^{\mu\nu} T^a b_L) G^a_{\mu\nu}$	$\mathbf{C}$
CVLL_bsbb	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L\gamma^\mu b_L)(ar{b}_L\gamma_\mu b_L)$	$\mathbf{C}$
CVLR_bsbb	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu b_L)(\bar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
CVRL_bsbb	$ \frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}b_L)(\bar{b}_L\gamma_{\mu}b_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}b_L)(\bar{b}_R\gamma_{\mu}b_R)} $ $ \frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^{\mu}b_R)(\bar{b}_L\gamma_{\mu}b_L) $	$\mathbf{C}$
CVRR_bsbb	$rac{4rac{V_F}{\sqrt{2}}}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R\gamma^\mu b_R)(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
CSLL_bsbb	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Rb_L)(b_Rb_L)$	$\mathbf{C}$
CSLR_bsbb	$\frac{4\tilde{G}_{F}^{2}}{\sqrt{2}}V_{tb}V_{ts}^{*}(\bar{s}_{R}b_{L})(\bar{b}_{L}b_{R})\\ \frac{4G_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}(\bar{s}_{L}b_{R})(\bar{b}_{R}b_{L})\\ \frac{4G_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}(\bar{s}_{L}b_{R})(\bar{b}_{L}b_{R})$	$\mathbf{C}$
CSRL_bsbb	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Lb_R)(\bar{b}_Rb_L)$	$\mathbf{C}$
CSRR_bsbb	$\frac{4\overset{\leftarrow}{V_{c}}V_{tb}V_{ts}^{*}(\bar{s}_{L}b_{R})(\bar{b}_{L}b_{R})}{\sqrt{2}}$	$\mathbf{C}$
CTLL_bsbb	$rac{4ar{Q}_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R\sigma^{\mu u}b_L)(ar{b}_R\sigma_{\mu u}b_L)$	$\mathbf{C}$
CTRR_bsbb	$\frac{4 \check{G}_F}{\sqrt{2}} V_{tb} V_{ts}^* (\bar{s}_L \sigma^{\mu\nu} b_R) (\bar{b}_L \sigma_{\mu\nu} b_R)$	$\mathbf{C}$
CVLL_bsss	$\frac{\frac{4G_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}b_L)(\bar{s}_L\gamma_{\mu}s_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}b_L)(\bar{s}_R\gamma_{\mu}s_R)}$ $\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^{\mu}b_R)(\bar{s}_L\gamma_{\mu}s_L)$	$\mathbf{C}$
CVLR_bsss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L\gamma^\mu b_L)(ar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CVRL_bsss	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^\mu b_R)(\bar{s}_L\gamma_\mu s_L)$	$\mathbf{C}$
CVRR_bsss	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^\mu b_R)(\bar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CSLL_bsss	$\frac{4\overset{\leftarrow}{V_{c}}V_{tb}V_{ts}^{*}(\bar{s}_{R}b_{L})(\bar{s}_{R}s_{L})}{\sqrt{2}}$	$^{\mathrm{C}}$
CSLR_bsss	$\frac{4G_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Rb_L)(\bar{s}_Rs_L) \\ \frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Rb_L)(\bar{s}_Ls_R) \\ \frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Lb_R)(\bar{s}_Rs_L)$	$\mathbf{C}$
CSRL_bsss	$\frac{4 \overset{Q}{V_{E}}}{\sqrt{2}} V_{tb} V_{ts}^{*}(\bar{s}_{L} b_{R})(\bar{s}_{R} s_{L})$	$\mathbf{C}$
CSRR_bsss	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Lb_R)(\bar{s}_Ls_R)$	$\mathbf{C}$
CTLL_bsss	$\frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\sigma^{\mu\nu}b_L)(\bar{s}_R\sigma_{\mu\nu}s_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\sigma^{\mu\nu}b_R)(\bar{s}_L\sigma_{\mu\nu}s_R)}$ $\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}b_L)(\bar{d}_L\gamma_{\mu}d_L)$	$\mathbf{C}$
CTRR_bsss	$rac{4rac{arphi_F^c}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L\sigma^{\mu u}b_R)(ar{s}_L\sigma_{\mu u}s_R)}{2}$	$\mathbf{C}$
CVLL_bsdd	$\frac{4G_F}{4G_F}V_{th}V_t^*(\bar{s}_I\gamma^{\mu}b_I)(\bar{d}_I\gamma_{\mu}d_I)$	$\mathbf{C}$

WC name	Operator	Type
CVLR_bsdd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu b_L)(\bar{d}_R\gamma_\mu d_R)$	C
CVRL_bsdd	$rac{4ackslash G_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(ar s_R\gamma^\mu b_R)(ar d_L\gamma_\mu d_L)$	$\mathbf{C}$
CVRR_bsdd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^\mu b_R)(\bar{d}_R\gamma_\mu d_R)$	$^{\mathrm{C}}$
CSLL_bsdd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_Rb_L)(ar{d}_Rd_L)$	$\mathbf{C}$
CSLR_bsdd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Rb_L)(\bar{d}_Ld_R)$	$\mathbf{C}$
CSRL_bsdd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Lb_R)(\bar{d}_Rd_L)$	$\mathbf{C}$
CSRR_bsdd	$\frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L b_R)(\bar{d}_R d_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L b_R)(\bar{d}_L d_R)}$	$^{\mathrm{C}}$
CTLL_bsdd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\sigma^{\mu u}b_L)(\bar{d}_R\sigma_{\mu u}d_L)$	$\mathbf{C}$
CTRR_bsdd	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L\sigma^{\mu u}b_R)(ar{d}_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
CVLLt_bsdd	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha\gamma^\mu b_L^eta)(ar{d}_L^eta\gamma_\mu d_L^lpha)$	$\mathbf{C}$
CVLRt_bsdd	$rac{4reve{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha\gamma^\mu b_L^eta)(ar{d}_R^eta\gamma_\mu d_R^lpha)$	$\mathbf{C}$
CVRLt_bsdd	$rac{4reve{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\gamma^\mu b_R^eta)(ar{d}_L^eta\gamma_\mu d_L^lpha)$	$\mathbf{C}$
CVRRt_bsdd	$rac{4G_F^c}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\gamma^\mu b_R^eta)(ar{d}_R^eta\gamma_\mu d_R^lpha)$	$\mathbf{C}$
CSLLt_bsdd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha b_L^eta)(ar{d}_R^eta d_L^lpha)$	$\mathbf{C}$
CSLRt_bsdd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha b_L^eta)(ar{d}_L^eta d_R^lpha)$	$\mathbf{C}$
CSRLt_bsdd	$rac{4\ddot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha b_R^eta)(ar{d}_R^eta d_L^lpha)$	$\mathbf{C}$
CSRRt_bsdd	$rac{4reve{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha b_R^eta)(ar{d}_L^eta d_R^lpha)$	$\mathbf{C}$
CTLLt_bsdd	$rac{4 ilde{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\sigma^{\mu u}b_L^eta)(ar{d}_R^eta\sigma_{\mu u}d_L^lpha)$	$\mathbf{C}$
CTRRt_bsdd	$rac{4 \widetilde{G}_F^2}{\sqrt{2}} V_{tb} V_{ts}^* (ar{s}_L^lpha \sigma^{\mu u} b_R^eta) (ar{d}_L^eta \sigma_{\mu u} d_R^lpha)$	$\mathbf{C}$
CVLL_bsuu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu b_L)(\bar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
CVLR_bsuu	$\frac{4\check{G}_F^r}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu b_L)(\bar{u}_R\gamma_\mu u_R)$	$\mathbf{C}$
CVRL_bsuu	$rac{4G_F}{2}V_{tb}V_{ts}^*(ar{s}_R\gamma^\mu b_R)(ar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
CVRR_bsuu	$\frac{4\check{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^\mu b_R)(\bar{u}_R\gamma_\mu u_R)$	$\mathbf{C}$
CSLL_bsuu	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_Rb_L)(ar{u}_Ru_L)$	$\mathbf{C}$
CSLR_bsuu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Rb_L)(\bar{u}_Lu_R)$	$\mathbf{C}$
CSRL_bsuu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Lb_R)(\bar{u}_Ru_L)$	$\mathbf{C}$
CSRR_bsuu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_Lb_R)(\bar{u}_Lu_R)$	$\mathbf{C}$
CTLL_bsuu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\sigma^{\mu\nu}b_L)(\bar{u}_R\sigma_{\mu\nu}u_L)$	$\mathbf{C}$
CTRR_bsuu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\sigma^{\mu\nu}b_R)(\bar{u}_L\sigma_{\mu\nu}u_R)$	$\mathbf{C}$
CVLLt_bsuu	$rac{4 \widetilde{G_F}}{\sqrt{2}} V_{tb} V_{ts}^* (ar{s}_L^lpha \gamma^\mu b_L^eta) (ar{u}_L^eta \gamma_\mu u_L^lpha)$	$\mathbf{C}$
CVLRt_bsuu	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha\gamma^\mu b_L^eta)(ar{u}_R^eta\gamma_\mu u_R^lpha)$	$\mathbf{C}$
CVRLt_bsuu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\gamma^\mu b_R^eta)(ar{u}_L^eta\gamma_\mu u_L^lpha)$	$\mathbf{C}$
CVRRt_bsuu	$rac{4G_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\gamma^\mu b_R^eta)(ar{u}_R^eta\gamma_\mu u_R^lpha)$	$\mathbf{C}$
CSLLt_bsuu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha b_L^eta)(ar{u}_R^eta u_L^lpha)$	$\mathbf{C}$
CSLRt_bsuu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha b_L^eta)(ar{u}_L^eta u_R^lpha)$	$\mathbf{C}$
CSRLt_bsuu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^{lpha}b_R^{eta})(ar{u}_R^{eta}u_L^{lpha})$	$^{\mathrm{C}}$

WC name	Operator	Type
CSRRt_bsuu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L^{\alpha}b_R^{\beta})(\bar{u}_L^{\beta}u_R^{\alpha})$	C
CTLLt_bsuu	$rac{4\widetilde{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\sigma^{\mu u}b_L^eta)(ar{u}_R^eta\sigma_{\mu u}u_L^lpha)$	$^{\mathrm{C}}$
CTRRt_bsuu	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L^{lpha}\sigma^{\mu u}b_R^{eta})(\bar{u}_L^{eta}\sigma_{\mu u}u_R^{lpha})$	$\mathbf{C}$
CVLL_bscc	$\frac{4\check{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu b_L)(\bar{c}_L\gamma_\mu c_L)$	$\mathbf{C}$
CVLR_bscc	$\frac{4\check{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu b_L)(\bar{c}_R\gamma_\mu c_R)$	$\mathbf{C}$
CVRL_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R\gamma^\mu b_R)(ar{c}_L\gamma_\mu c_L)$	$\mathbf{C}$
CVRR_bscc	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\gamma^\mu b_R)(\bar{c}_R\gamma_\mu c_R)$	$\mathbf{C}$
CSLL_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_Rb_L)(ar{c}_Rc_L)$	$^{\mathrm{C}}$
CSLR_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_Rb_L)(ar{c}_Lc_R)$	$\mathbf{C}$
CSRL_bscc	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_Lb_R)(ar{c}_Rc_L)$	$\mathbf{C}$
CSRR_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_Lb_R)(ar{c}_Lc_R)$	$^{\mathrm{C}}$
CTLL_bscc	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_R\sigma^{\mu\nu}b_L)(\bar{c}_R\sigma_{\mu\nu}c_L)$	$^{\mathrm{C}}$
CTRR_bscc	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\sigma^{\mu\nu}b_R)(\bar{c}_L\sigma_{\mu\nu}c_R)$	$^{\mathrm{C}}$
CVLLt_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar s_L^lpha\gamma^\mu b_L^eta)(ar c_L^eta\gamma_\mu c_L^lpha)$	$\mathbf{C}$
CVLRt_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar s_L^lpha\gamma^\mu b_L^eta)(ar c_R^eta\gamma_\mu c_R^lpha)$	$^{\mathrm{C}}$
CVRLt_bscc	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\gamma^\mu b_R^eta)(ar{c}_L^eta\gamma_\mu c_L^lpha)$	$\mathbf{C}$
CVRRt_bscc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\gamma^\mu b_R^eta)(ar{c}_R^eta\gamma_\mu c_R^lpha)$	$\mathbf{C}$
CSLLt_bscc	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^{lpha}b_L^{eta})(ar{c}_R^{eta}c_L^{lpha})$	$\mathbf{C}$
CSLRt_bscc	$rac{4rac{arphi_F}{\sqrt{2}}}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha b_L^eta)(ar{c}_L^eta c_R^lpha)$	$\mathbf{C}$
CSRLt_bscc	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L^{lpha}b_R^{eta})(\bar{c}_R^{eta}c_L^{lpha})$	$\mathbf{C}$
CSRRt_bscc	$rac{4G_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha b_R^eta)(ar{c}_L^eta c_R^lpha)$	$^{\mathrm{C}}$
CTLLt_bscc	$rac{4G_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_R^lpha\sigma^{\mu u}b_L^eta)(ar{c}_R^eta\sigma_{\mu u}c_L^lpha)$	$\mathbf{C}$
CTRRt_bscc	$rac{4\widetilde{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*(ar{s}_L^lpha\sigma^{\mu u}b_R^eta)(ar{c}_L^eta\sigma_{\mu u}c_R^lpha)$	$\mathbf{C}$

## ${\tt sbnunu}$

WC name	Operator	Type
CL_bsnuenue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_e)$	С
CL_bsnumunumu	$rac{4 \check{G}_F}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu b_L) (\bar{ u}_\mu \gamma_\mu (1-\gamma_5)  u_\mu)$	$\mathbf{C}$
${\tt CL\_bsnutaunutau}$	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu b_L) (\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_\tau)$	$\mathbf{C}$
CL_bsnuenumu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^{\mu}b_L)(ar{ u}_{\mu}\gamma_{\mu}(1-\gamma_5) u_e)$	$\mathbf{C}$
CL_bsnumunue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CL_bsnumunutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
${\tt CL\_bsnutaunumu}$	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^{\mu}b_L)(ar{ u}_{\mu}\gamma_{\mu}(1-\gamma_5) u_{ au})$	$\mathbf{C}$
CL_bsnuenutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$

WC name	Operator	Type
CL_bsnutaunue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{ au})$	С
CR_bsnuenue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu b_R) (\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_e)$	$\mathbf{C}$
CR_bsnumunumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_bsnutaunutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CR_bsnuenumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_bsnumunue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_bsnumunutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_bsnutaunumu	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{ u}_{\mu}\gamma_{\mu}(1-\gamma_5) u_{ au})$	$\mathbf{C}$
CR_bsnuenutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_bsnutaunue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$

## sd

WC name	Operator	Type
C9_sdee	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}s_L)(\bar{e}\gamma_{\mu}e)$	С
C9p_sdee	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^{\mu}s_R)(ar{e}\gamma_{\mu}e)$	$\mathbf{C}$
C10_sdee	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(ar{d}_{L}\gamma^{\mu}s_{L})(ar{e}\gamma_{\mu}\gamma_{5}e)$	$\mathbf{C}$
C10p_sdee	$\frac{4\tilde{G_F}}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}s_R)(\bar{e}\gamma_{\mu}\gamma_5 e)$	$\mathbf{C}$
CS_sdee	$\frac{4\tilde{Q}_{F}^{2}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{s}(\bar{d}_{L}s_{R})(\bar{e}e)$	$\mathbf{C}$
CSp_sdee	$\frac{4\tilde{Q}_{F}^{2}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{s}(\bar{d}_{R}s_{L})(\bar{e}e)$	$\mathbf{C}$
CP_sdee	$rac{4 V_{L}^{2}}{\sqrt{2}} V_{ts} V_{td}^{*} rac{e^{2}}{16 \pi^{2}} m_{s}(ar{d}_{L} s_{R}) (ar{e} \gamma_{5} e)$	$\mathbf{C}$
CPp_sdee	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}m_s(ar{d}_Rs_L)(ar{e}\gamma_5e)$	$\mathbf{C}$
C9_sdmumu	$rac{4 \tilde{G}_F^2}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_L \gamma^\mu s_L) (ar{\mu} \gamma_\mu \mu)$	$\mathbf{C}$
C9p_sdmumu	$rac{4 G_F^2}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_R \gamma^\mu s_R) (ar{\mu} \gamma_\mu \mu)$	$\mathbf{C}$
C10_sdmumu	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{L}\gamma^{\mu}s_{L})(\bar{\mu}\gamma_{\mu}\gamma_{5}\mu)$	$\mathbf{C}$
C10p_sdmumu	$rac{4 \tilde{Q}_F^2}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_R \gamma^\mu s_R) (ar{\mu} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
CS_sdmumu	$\frac{4 \tilde{G}_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s(\bar{d}_L s_R)(\bar{\mu}\mu)$	$\mathbf{C}$
CSp_sdmumu	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{s}(\bar{d}_{R}s_{L})(\bar{\mu}\mu)$	$\mathbf{C}$
CP_sdmumu	$\frac{4\tilde{Q}_{F}^{2}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{s}(\bar{d}_{L}s_{R})(\bar{\mu}\gamma_{5}\mu)$	$\mathbf{C}$
CPp_sdmumu	$\frac{4\tilde{Q}_{F}^{2}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{s}(\bar{d}_{R}s_{L})(\bar{\mu}\gamma_{5}\mu)$	$\mathbf{C}$
C9_sdtautau	$rac{4 G_F^2}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_L \gamma^\mu s_L) (ar{ au} \gamma_\mu  au)$	$\mathbf{C}$
C9p_sdtautau	$rac{4G_F^2}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^{\mu}s_R)(ar{ au}\gamma_{\mu} au)$	$\mathbf{C}$
C10_sdtautau	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}s_L)(ar{ au}\gamma_{\mu}\gamma_5 au)$	$\mathbf{C}$
C10p_sdtautau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}s_R)(\bar{\tau}\gamma_{\mu}\gamma_5\tau)$	$\mathbf{C}$

WC name	Operator	Type
S_sdtautau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_L s_R)(\bar{\tau}\tau)$	С
Sp_sdtautau	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}m_s(ar{d}_Rs_L)(ar{ au} au)$	$\mathbf{C}$
P_sdtautau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_L s_R)(\bar{\tau}\gamma_5\tau)$	$\mathbf{C}$
Pp_sdtautau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_Rs_L)(\bar{\tau}\gamma_5\tau)$	$\mathbf{C}$
7_sd	$\frac{\sqrt{2}}{4G_F}V_{ts}V_{td}^* \frac{e}{16\pi^2}m_s(\bar{d}_L\sigma^{\mu\nu}s_R)F_{\mu\nu}$	$\mathbf{C}$
7p_sd	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e}{16\pi^2}m_s(\bar{d}_R\sigma^{\mu\nu}s_L)F_{\mu\nu}$	$\mathbf{C}$
 B_sd	$\frac{4G_F}{V_c}V_c^* \frac{g_s}{V_c^*}m \left(\bar{d}_T\sigma^{\mu\nu}T^a_{sp}\right)G^a$	$\mathbf{C}$
Bp_sd	$ \frac{\frac{\sqrt{2}}{\sqrt{2}} V_{ts} V_{td}^* \frac{g_s}{16\pi^2} m_s (\bar{d}_R \sigma^{\mu\nu} T^a s_L) G_{\mu\nu}^a}{\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{g_s}{16\pi^2} m_s (\bar{d}_R \sigma^{\mu\nu} T^a s_L) G_{\mu\nu}^a} $	$\mathbf{C}$
LL_sdss	$rac{4G_F}{4G_F}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{s}_L\gamma_\mu s_L)$	$\mathbf{C}$
LR_sdss	$\frac{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}s_R)}{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^{\mu}s_R)(\bar{s}_L\gamma_{\mu}s_L)}$	$\mathbf{C}$
RL_sdss	$rac{4G_F^2}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{s}_L\gamma_\mu s_L)$	$\mathbf{C}$
RR_sdss	$rac{4ar{G}_F^2}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
LL_sdss	$ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^{\mu}s_R)(\bar{s}_R\gamma_{\mu}s_R) \\ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{s}_Rs_L) \\ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{s}_Ls_R) \\ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{s}_Rs_L) \\ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{s}_Ls_R) \\ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{s}_Ls_R) \\ \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{s}_Ls_R) $	$\mathbf{C}$
LR_sdss	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{s}_Ls_R)$	$\mathbf{C}$
RL_sdss	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{s}_Rs_L)$	$\mathbf{C}$
RR_sdss	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{s}_Ls_R)$	$\mathbf{C}$
LL_sdss	$\frac{1}{\sqrt{2}}V_{ts}V_{td}(a_R\sigma^{\mu\nu}s_L)(s_R\sigma_{\mu\nu}s_L)$	$\mathbf{C}$
RR_sdss	$\frac{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_R)(\bar{s}_L\sigma_{\mu\nu}s_R)}{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^{\mu}s_L)(\bar{d}_L\gamma_{\mu}d_L)}$ $\frac{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^{\mu}s_L)(\bar{d}_R\gamma_{\mu}d_R)}{\sqrt{2}}$	$\mathbf{C}$
LL_sddd	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{d}_L\gamma_\mu d_L)$	$\mathbf{C}$
LR_sddd	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{d}_R\gamma_\mu d_R)$	$\mathbf{C}$
RL_sddd	$rac{4 \overset{\sim}{V_{c}}}{\sqrt{2}} V_{ts} V_{td}^* (ar{d}_R \gamma^\mu s_R) (ar{d}_L \gamma_\mu d_L)$	$\mathbf{C}$
RR_sddd	$\frac{4G_F}{V}V_{\bullet}V_{\bullet}^*(d_D\gamma^{\mu}s_D)(d_D\gamma_{\bullet}d_D)$	$\mathbf{C}$
LL_sddd	$ \frac{\sqrt{2}}{\sqrt{2}} V_{ts} V_{td}^*(\bar{d}_R s_L)(\bar{d}_R d_L) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^*(\bar{d}_R s_L)(\bar{d}_L d_R) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^*(\bar{d}_L s_R)(\bar{d}_R d_L) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^*(\bar{d}_L s_R)(\bar{d}_L d_R) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^*(\bar{d}_L s_R)(\bar{d}_L d_R) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^*(\bar{d}_L s_R)(\bar{d}_L d_R) $	$\mathbf{C}$
LR_sddd	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{d}_Ld_R)$	$\mathbf{C}$
RL_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{d}_Rd_L)$	$\mathbf{C}$
RR_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{d}_Ld_R)$	$\mathbf{C}$
L_sddd	$\frac{1}{\sqrt{2}} v_{ts} v_{td} (a_R \sigma - s_L) (a_R \sigma_{\mu\nu} a_L)$	$\mathbf{C}$
R_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\sigma^{\mu u}s_R)(ar{d}_L\sigma_{\mu u}d_R)$	$\mathbf{C}$
L_sdbb	$\frac{\frac{4\widetilde{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{b}_L\gamma_\mu b_L)}{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{b}_R\gamma_\mu b_R)}$	$\mathbf{C}$
R_sdbb	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
L_sdbb	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{b}_L\gamma_\mu b_L)$	$\mathbf{C}$
RR_sdbb	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{b}_R\gamma_\mu b_R)$	$^{\mathrm{C}}$
LL_sdbb	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{b}_Rb_L)$	$^{\mathrm{C}}$
LR_sdbb	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{b}_Lb_R)$	$^{\mathrm{C}}$
RL_sdbb	$ \frac{\sqrt{2}}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^{\mu} s_R) (\bar{b}_L \gamma_{\mu} b_R) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^{\mu} s_R) (\bar{b}_L \gamma_{\mu} b_L) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^{\mu} s_R) (\bar{b}_R \gamma_{\mu} b_R) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{b}_R b_L) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{b}_L b_R) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{b}_R b_L) \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{b}_R b_L) $	$\mathbf{C}$
R_sdbb	$rac{4rac{arphi_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L s_R)(ar{b}_L b_R)}{2}$	$\mathbf{C}$

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	WC name	Operator	Type
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	CTLL_sdbb	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\sigma^{\mu\nu}s_L)(\bar{b}_R\sigma_{\mu\nu}b_L)$	C
$ \begin{array}{c} \text{CVLRt\_sdbb} & \frac{4G_F^2}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^2\gamma^\mu s_L^\beta)(\bar{b}_R^\beta\gamma_\mu b_R^\alpha) & \text{C} \\ \text{CVRlt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R^\beta)(\bar{b}_L^\beta\gamma_\mu b_L^\alpha) & \text{C} \\ \text{CVRRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R^\beta)(\bar{b}_R^\beta\gamma_\mu b_R^\alpha) & \text{C} \\ \text{CSLLt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R^\beta)(\bar{b}_R^\beta\gamma_\mu b_R^\alpha) & \text{C} \\ \text{CSLRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\beta)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRLt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\beta)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\beta)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\beta)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CTLLt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\alpha_R^\alpha)(\bar{b}_L\alpha_R\mu_L b_L^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\alpha_R^\alpha)(\bar{b}_L\alpha_R\mu_L b_L^\alpha) & \text{C} \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_R\mu_L b_L^\alpha) & \text{C} \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L b_L^\alpha) & \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L b_L^\alpha) & \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R b_L)(\bar{b}_R\alpha_\mu b_L^\alpha) & \text{C} \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L b_L^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L b_L^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L b_L^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R\alpha_L^\alpha) & \text{C} \\ \text{CVILL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\alpha_R^\alpha)(\bar{b}_R^\alpha\mu_L^\alpha) & \text{C} \\ \text{CVILL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V$	CTRR_sdbb		$\mathbf{C}$
$ \begin{array}{c} \text{CVRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^{\gamma} \mu_s^\beta) (\bar{b}_L^\beta \gamma_\mu b_L^\alpha) \\ \text{CVRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{b}_R^\beta \gamma_\mu b_R^\alpha) \\ \text{CSLLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CSLRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\beta) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CSRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CSRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\alpha) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CCTRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\alpha) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CCTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\alpha) (\bar{b}_R^\beta b_L^\alpha) \\ \text{CCTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\alpha) (\bar{b}_R^\beta a_{\mu\nu} b_L^\alpha) \\ \text{CCTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\alpha) (\bar{b}_R^\beta a_{\mu\nu} b_R^\alpha) \\ \text{CCTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_R) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CCVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CCSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R u_L) \\ \text{CCSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) \\ \text{CCSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) \\ \text{CCSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{CCTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L \sigma_\mu u_L) \\ \text{CCTRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma_\mu^\mu s_R) (\bar{u}_L \sigma_\mu u_R) \\ \text{CCVLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \sigma_\mu^\mu s_R) (\bar{u}_L^\alpha \gamma_\mu u_R^\alpha) \\ \text{CCVLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \gamma^\mu s_R^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CCSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^$	CVLLt_sdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha\gamma^\mu s_L^eta)(ar{b}_L^eta\gamma_\mu b_L^lpha)$	$\mathbf{C}$
$\begin{array}{c} \text{CVRRt\_sdbb} & \frac{\sqrt{G_F}}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{b}_R^\beta \gamma_\mu b_R^\alpha) \\ \\ \text{CSLLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{b}_R^\beta \gamma_\mu b_R^\alpha) \\ \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{b}_R^\beta b_R^\alpha) \\ \\ \text{CSRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{b}_R^\beta b_R^\alpha) \\ \\ \text{CSRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_R^\alpha) \\ \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_R^\alpha) \\ \\ \text{CCSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\alpha) (\bar{b}_R^\beta b_R^\alpha) \\ \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \sigma^{\mu\nu} s_R^\beta) (\bar{b}_R^\beta \sigma_{\mu\nu} b_R^\alpha) \\ \\ \text{CTLLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \sigma^{\mu\nu} s_R^\beta) (\bar{b}_L^\beta \sigma_{\mu\nu} b_R^\alpha) \\ \\ \text{CTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \sigma^{\mu\nu} s_R^\beta) (\bar{b}_L^\beta \sigma_{\mu\nu} b_R^\alpha) \\ \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R) (\bar{b}_L \sigma_{\mu\nu} b_R^\alpha) \\ \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R) (\bar{b}_L \gamma_{\mu} u_L) \\ \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_R) (\bar{u}_L \gamma_{\mu} u_L) \\ \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R \gamma_\mu u_R) \\ \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R u_L) \\ \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) \\ \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L \sigma_{\mu\nu} u_L) \\ \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L \sigma_{\mu\nu} u_L) \\ \\ \text{CCTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L \sigma_{\mu\nu} u_L) \\ \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^\mu \nu^\mu s_R) (\bar{u}_R^\mu \sigma_\mu u_R) \\ \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \\ \text{CCSLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\mu) (\bar{u}_R^\alpha s_R^\mu) \\ \\ \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\mu) (\bar{u}_R^\alpha $	CVLRt_sdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha\gamma^\mu s_L^eta)(ar{b}_R^eta\gamma_\mu b_R^lpha)$	$\mathbf{C}$
$\begin{array}{c} \text{CSLLt\_sdbb} & \frac{4C_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\alpha) (\bar{b}_R^\alpha b_L^\alpha) & \text{C} \\ \text{CSLRt\_sdbb} & \frac{4C_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\alpha) (\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{b}_R^\beta b_L^\alpha) & \text{C} \\ \text{CSRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\mu) (\bar{b}_L^\beta b_R^\alpha) & \text{C} \\ \text{CTLLt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_L^\mu v_{sL}^\mu) (\bar{b}_R^\beta \sigma_{\mu\nu} b_L^\alpha) & \text{C} \\ \text{CTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \sigma^{\mu\nu} s_R^\beta) (\bar{b}_L^\beta \sigma_{\mu\nu} b_R^\alpha) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_L^\mu) (\bar{b}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVLR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L) (\bar{u}_L \gamma_\mu u_L) & \text{C} \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R) (\bar{u}_L \gamma_\mu u_L) & \text{C} \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R) (\bar{u}_R \gamma_\mu u_R) & \text{C} \\ \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R \gamma_\mu u_R) & \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R u_L) & \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) & \text{C} \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) & \text{C} \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L \sigma_{\mu\nu} u_L) & \text{C} \\ \text{CTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L \sigma_{\mu\nu} u_L) & \text{C} \\ \text{CTRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^\mu \nu^\mu s_L) (\bar{u}_R \sigma_{\mu\nu} u_L) & \text{C} \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^\mu \nu^\mu s_L) (\bar{u}_R^\mu \gamma_\mu u_R^\mu) & \text{C} \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^\mu \nu^\mu s_L^\mu) (\bar{u}_R^\mu \gamma_\mu u_R^\mu) & \text{C} \\ \text{CVILt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\mu \gamma^\mu s_L^\mu) (\bar{u}_R^\mu \gamma_\mu u_R^\mu) & \text{C} \\ \text{CSILt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_$	CVRLt_sdbb	$rac{4\widetilde{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\gamma^\mu s_R^eta)(ar{b}_L^eta\gamma_\mu b_L^lpha)$	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVRRt_sdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\gamma^\mu s_R^eta)(ar{b}_R^eta\gamma_\mu b_R^lpha)$	$\mathbf{C}$
$\begin{array}{c} \text{CSRLt\_sdbb} & \frac{\sqrt{2}}{\sqrt{2}} V_{ts} V_{td} (\bar{d}_{\alpha}^{L} S_{R}^{R}) (\bar{b}_{\beta}^{R} b_{\alpha}^{L}) \\ \text{CSRRt\_sdbb} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td} (\bar{d}_{\alpha}^{L} S_{R}^{R}) (\bar{b}_{\beta}^{R} b_{\alpha}^{L}) \\ \text{C} \\ \text{CTLLt\_sdbb} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{\alpha}^{R} \sigma^{\mu\nu} s_{\beta}^{L}) (\bar{b}_{R}^{R} \sigma_{\mu\nu} b_{\alpha}^{L}) \\ \text{C} \\ \text{CTRRt\_sdbb} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{\alpha}^{R} \sigma^{\mu\nu} s_{\beta}^{R}) (\bar{b}_{B}^{R} \sigma_{\mu\nu} b_{\alpha}^{L}) \\ \text{C} \\ \text{CTRRt\_sdbb} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{\alpha}^{L} \sigma^{\mu\nu} s_{\beta}^{R}) (\bar{b}_{B}^{R} \sigma_{\mu\nu} b_{\alpha}^{R}) \\ \text{C} \\ \text{CVLL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{\alpha} \sigma^{\mu\nu} s_{\beta}^{R}) (\bar{b}_{L}^{R} \sigma_{\mu\nu} b_{\alpha}^{R}) \\ \text{C} \\ \text{CVLR\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} \gamma^{\mu} s_{L}) (\bar{u}_{L} \gamma_{\mu} u_{L}) \\ \text{C} \\ \text{CVRL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} \gamma^{\mu} s_{R}) (\bar{u}_{L} \gamma_{\mu} u_{L}) \\ \text{C} \\ \text{CVRR\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} \gamma^{\mu} s_{R}) (\bar{u}_{R} \gamma_{\mu} u_{R}) \\ \text{C} \\ \text{CSLL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} s_{L}) (\bar{u}_{R} u_{L}) \\ \text{C} \\ \text{CSLL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} s_{L}) (\bar{u}_{L} u_{R}) \\ \text{C} \\ \text{CSRL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} s_{L}) (\bar{u}_{L} u_{R}) \\ \text{C} \\ \text{CSRL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{L} s_{R}) (\bar{u}_{L} u_{R}) \\ \text{C} \\ \text{CSRL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{L} s_{R}) (\bar{u}_{L} u_{R}) \\ \text{C} \\ \text{CTLL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{L} s_{R}) (\bar{u}_{L} \sigma_{\mu\nu} u_{L}) \\ \text{C} \\ \text{CTRR\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{L} \sigma^{\mu\nu} s_{B}) (\bar{u}_{L} \sigma_{\mu\nu} u_{L}) \\ \text{C} \\ \text{CVLt\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{L} \gamma^{\mu} s_{B}^{*}) (\bar{u}_{L} \gamma_{\mu} u_{\alpha}^{*}) \\ \text{C} \\ \text{CVLL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{L} \gamma^{\mu} s_{B}^{*}) (\bar{u}_{L}^{*} \gamma_{\mu} u_{\alpha}^{*}) \\ \text{C} \\ \text{CVRL\_sduu} & \frac{4G_{F}}{\sqrt{2}} V_{ts} V_{td}^{*} (\bar{d}_{R} \gamma^{\mu} s_{R}^{*}) (\bar{u}_{R}^{*} \gamma_{\mu} u_{\alpha}^{*}) \\ \text{C} \\ \text{CSLL\_sduu} & \frac{4G_{F}}{\sqrt{2}}$	CSLLt_sdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{b}_R^eta b_L^lpha)$	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSLRt_sdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{b}_L^eta b_R^lpha)$	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRLt_sdbb	$rac{4G_F^2}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{b}_R^eta b_L^lpha)$	$\mathbf{C}$
$\begin{array}{c} \text{CTRRt\_sdbb} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_{\alpha}^{\alpha} \sigma^{\mu\nu} s_R^{\beta}) (\bar{b}_{b}^{\beta} \sigma_{\mu\nu} b_R^{\alpha}) & \text{C} \\ \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_{L} \gamma^{\mu} s_L) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVLR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^{\mu} s_L) (\bar{u}_R \gamma_{\mu} u_R) & \text{C} \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^{\mu} s_R) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^{\mu} s_R) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R \gamma_{\mu} u_R) & \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R u_L) & \text{C} \\ \text{CSLR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) & \text{C} \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) & \text{C} \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) & \text{C} \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) & \text{C} \\ \text{CTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) & \text{C} \\ \text{CTRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_L) (\bar{u}_R \sigma_{\mu\nu} u_L) & \text{C} \\ \text{CVLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R) (\bar{u}_L \sigma_{\mu\nu} u_R) & \text{C} \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^{\mu} s_L^*) (\bar{u}_R^* \gamma_{\mu} u_R^*) & \text{C} \\ \text{CVLRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* \gamma^{\mu} s_R^*) (\bar{u}_L^* \gamma_{\mu} u_L^*) & \text{C} \\ \text{CVRtL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* \gamma^{\mu} s_R^*) (\bar{u}_R^* \gamma_{\mu} u_R^*) & \text{C} \\ \text{CVRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* \gamma^{\mu} s_R^*) (\bar{u}_R^* \gamma_{\mu} u_R^*) & \text{C} \\ \text{CSLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* s_L^*) (\bar{u}_R^* u_L) & \text{C} \\ \text{CSLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* s_L^*) (\bar{u}_R^* u_L) & \text{C} \\ \text{CSRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* s_L^*) (\bar{u}_R^* u_L) & \text{C} \\ \text{CSRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* s_L^*) (\bar{u}_R^* u_L) & \text{C} \\ \text{CSRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^* $	CSRRt_sdbb	$rac{4G_F^2}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{b}_L^eta b_R^lpha)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{C} \\ \text{CVRL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{u}_L\gamma_\mu u_L) \\ \text{C} \\ \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{u}_L\gamma_\mu u_L) \\ \text{C} \\ \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{u}_R\gamma_\mu u_R) \\ \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Ru_L) \\ \text{CSLR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Lu_R) \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Lu_R) \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Lu_R) \\ \text{CCSRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Lu_R) \\ \text{CTLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_L)(\bar{u}_R\sigma_{\mu\nu}u_L) \\ \text{CTRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_R)(\bar{u}_L\sigma_{\mu\nu}u_R) \\ \text{CVLLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_R)(\bar{u}_L\sigma_{\mu\nu}u_R) \\ \text{CVILt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^2\gamma^\mu s_L^2)(\bar{u}_R^2\gamma_\mu u_L^2) \\ \text{CVIRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^2\gamma^\mu s_L^2)(\bar{u}_R^2\gamma_\mu u_R^2) \\ \text{CVIRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^2\gamma^\mu s_L^2)(\bar{u}_L^2\gamma_\mu u_L^2) \\ \text{CVIRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^2\gamma^\mu s_R^2)(\bar{u}_L^2\gamma_\mu u_L^2) \\ \text{CSLLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^2\gamma^\mu s_R^2)(\bar{u}_L^2\gamma_\mu u_L^2) \\ \text{CSLRL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^2\gamma^\mu s_R^2)(\bar{u}_L^2\gamma_\mu u_L^2) \\ \text{CSIRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^2\gamma^\mu s_R^2)(\bar{u}_R^2\gamma_\mu u_R^2) \\ \text{CCSIRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^2\gamma^\mu s_R^2)(\bar{u}_L^2\gamma_\mu u_L^2) \\ \text{CSRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^2s_R^2)(\bar{u}_L^2\alpha_R) \\ \text{CCSRRt\_sduu} $	CTLLt_sdbb	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\sigma^{\mu u}s_L^eta)(ar{b}_R^eta\sigma_{\mu u}b_L^lpha)$	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CTRRt_sdbb	$rac{4G_F^2}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha\sigma^{\mu u}s_R^{ar{eta}})(ar{b}_L^eta\sigma_{\mu u}b_R^lpha)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVLL_sduu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (d_R \gamma^\mu s_R) (\bar{u}_R \gamma_\mu u_R) \\ \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R u_L) \\ \text{C} \\ \text{CSLR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) \\ \text{C} \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{C} \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{C} \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{C} \\ \text{CTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_L) (\bar{u}_R \sigma_{\mu\nu} u_L) \\ \text{C} \\ \text{CTRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R) (\bar{u}_L \sigma_{\mu\nu} u_R) \\ \text{C} \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \gamma^\mu s_L^\beta) (\bar{u}_L^\beta \gamma_\mu u_L^\alpha) \\ \text{CVLRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \gamma^\mu s_L^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CVRLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{u}_L^\beta \gamma_\mu u_R^\alpha) \\ \text{CVRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CCSLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CCSLRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CSRLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ CCSRL$	CVLR_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R)$	$\mathbf{C}$
$\begin{array}{c} \text{CVRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (d_R \gamma^\mu s_R) (\bar{u}_R \gamma_\mu u_R) \\ \text{C} \\ \text{CSLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_R u_L) \\ \text{C} \\ \text{CSLR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L) (\bar{u}_L u_R) \\ \text{C} \\ \text{CSRL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{C} \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{C} \\ \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R) (\bar{u}_L u_R) \\ \text{C} \\ \text{CTLL\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_L) (\bar{u}_R \sigma_{\mu\nu} u_L) \\ \text{C} \\ \text{CTRR\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R) (\bar{u}_L \sigma_{\mu\nu} u_R) \\ \text{C} \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \gamma^\mu s_L^\beta) (\bar{u}_L^\beta \gamma_\mu u_L^\alpha) \\ \text{CVLRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \gamma^\mu s_L^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CVRLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{u}_L^\beta \gamma_\mu u_R^\alpha) \\ \text{CVRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \gamma^\mu s_R^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CCSLLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\beta) (\bar{u}_R^\beta \gamma_\mu u_R^\alpha) \\ \text{CCSLRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_L^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CSRLt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRRt\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ \text{CCSRLT\_sduu} & \frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha s_R^\beta) (\bar{u}_R^\beta u_L^\alpha) \\ CCSRL$	CVRL_sduu	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVRR_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(d_R\gamma^\mu s_R)(\bar{u}_R\gamma_\mu u_R)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSLL_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Ru_L)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CSRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CTLL\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\sigma^{\mu\nu}s_L)(\bar{u}_R\sigma_{\mu\nu}u_L) & \text{C} \\ \text{CTRR\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_R)(\bar{u}_L\sigma_{\mu\nu}u_R) & \text{C} \\ \text{CVLLt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^2\gamma^{\mu}s_L^{\beta})(\bar{u}_L^{\beta}\gamma_{\mu}u_L^{\alpha}) & \text{C} \\ \text{CVLRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{\alpha}\gamma^{\mu}s_L^{\beta})(\bar{u}_R^{\beta}\gamma_{\mu}u_R^{\alpha}) & \text{C} \\ \text{CVRtt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^{\alpha}\gamma^{\mu}s_R^{\beta})(\bar{u}_R^{\beta}\gamma_{\mu}u_R^{\alpha}) & \text{C} \\ \text{CVRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^{\alpha}\gamma^{\mu}s_R^{\beta})(\bar{u}_R^{\beta}\gamma_{\mu}u_R^{\alpha}) & \text{C} \\ \text{CVRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^{\alpha}\gamma^{\mu}s_R^{\beta})(\bar{u}_R^{\beta}\gamma_{\mu}u_R^{\alpha}) & \text{C} \\ \text{CSLLt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^{\alpha}s_L^{\beta})(\bar{u}_R^{\beta}u_L^{\alpha}) & \text{C} \\ \text{CSLRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^{\alpha}s_L^{\beta})(\bar{u}_R^{\beta}u_L^{\alpha}) & \text{C} \\ \text{CSRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{\alpha}s_R^{\beta})(\bar{u}_R^{\beta}u_L^{\alpha}) & \text{C} \\ \text{CSRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{\alpha}s_R^{\beta})(\bar{u}_R^{\beta}u_L^{\alpha}) & \text{C} \\ \text{CSRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{\alpha}s_R^{\beta})(\bar{u}_L^{\beta}u_R^{\alpha}) & \text{C} \\ \text{CTILT_Sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{\alpha}s_R^{\beta})(\bar{u}_L^{\beta}u_R^{\alpha}) & \text{C} \\ \end{array}$	CSLR_sduu		$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRL_sduu		$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRR_sduu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{u}_Lu_R)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CTLL_sduu		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CTRR_sduu		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVLLt_sduu	V 2	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVLRt_sduu	V2 000 = 10 / 10 /	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVRLt_sduu		$\mathbf{C}$
$\begin{array}{lll} \text{CSLRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^\alpha s_L^\beta)(\bar{u}_L^\beta u_R^\alpha) & \text{C} \\ \\ \text{CSRLt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha s_R^\beta)(\bar{u}_R^\beta u_L^\alpha) & \text{C} \\ \\ \text{CSRRt\_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha s_R^\beta)(\bar{u}_L^\beta u_R^\alpha) & \text{C} \\ \\ \text{CTILT_sduu} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha s_R^\mu)(\bar{u}_L^\beta u_R^\alpha) & \text{C} \\ \\ \end{array}$	CVRRt_sduu	VZ tak it it it i it	$\mathbf{C}$
CSRLt_sduu $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha s_R^\beta)(\bar{u}_R^\beta u_L^\alpha) \qquad \qquad C$ CSRRt_sduu $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha s_R^\beta)(\bar{u}_L^\beta u_R^\alpha) \qquad \qquad C$ CTILt_sduu $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha s_R^\mu)(\bar{u}_L^\beta u_R^\alpha) \qquad \qquad C$	CSLLt_sduu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{u}_R^eta u_L^lpha)$	$\mathbf{C}$
CSRRt_sduu $\frac{{}^{4}G_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}(\bar{d}_{L}^{\alpha}s_{R}^{\beta})(\bar{u}_{L}^{\beta}u_{R}^{\alpha}) \qquad \qquad C$ CTII+ sduu $\frac{{}^{4}G_{F}}{\sqrt{2}}V_{t}V_{td}^{*}(\bar{d}_{L}^{\alpha}\sigma_{R}^{\mu\nu}s_{R}^{\beta})(\bar{u}_{L}^{\beta}\sigma_{R}^{\alpha}) \qquad \qquad C$	CSLRt_sduu	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{u}_L^eta u_R^lpha)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRLt_sduu	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{u}_R^eta u_L^lpha)$	$\mathbf{C}$
$\begin{array}{cccc} \text{CTLLt\_sduu} & \frac{4 \bar{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R^\alpha \sigma^{\mu\nu} s_L^\beta) (\bar{u}_R^\beta \sigma_{\mu\nu} u_L^\alpha) & \text{C} \\ \text{CTRRt\_sduu} & \frac{4 G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \sigma^{\mu\nu} s_R^\beta) (\bar{u}_L^\beta \sigma_{\mu\nu} u_R^\alpha) & \text{C} \\ \text{CVLL\_sdcc} & \frac{4 G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L) (\bar{c}_L \gamma_\mu c_L) & \text{C} \\ \text{CVLR\_sdcc} & \frac{4 G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L) (\bar{c}_R \gamma_\mu c_R) & \text{C} \\ \text{CVRL\_sdcc} & \frac{4 G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R) (\bar{c}_L \gamma_\mu c_L) & \text{C} \\ \text{CVRR\_sdcc} & \frac{4 G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R) (\bar{c}_R \gamma_\mu c_R) & \text{C} \\ \end{array}$	CSRRt_sduu	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{u}_L^eta u_R^lpha)$	$\mathbf{C}$
$\begin{array}{cccc} \text{CTRRt\_sduu} & \frac{4 \bar{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L^\alpha \sigma^{\mu\nu} s_R^\beta) (\bar{u}_L^\beta \sigma_{\mu\nu} u_R^\alpha) & \text{C} \\ \text{CVLL\_sdcc} & \frac{4 \bar{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L) (\bar{c}_L \gamma_\mu c_L) & \text{C} \\ \text{CVLR\_sdcc} & \frac{4 \bar{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L) (\bar{c}_R \gamma_\mu c_R) & \text{C} \\ \text{CVRL\_sdcc} & \frac{4 \bar{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R) (\bar{c}_L \gamma_\mu c_L) & \text{C} \\ \text{CVRR\_sdcc} & \frac{4 \bar{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R) (\bar{c}_R \gamma_\mu c_R) & \text{C} \\ \end{array}$	CTLLt_sduu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R^{lpha}\sigma^{\mu u}s_L^{eta})(\bar{u}_R^{eta}\sigma_{\mu u}u_L^{lpha})$	$\mathbf{C}$
$\begin{array}{cccc} \text{CVLL\_sdcc} & \frac{4\bar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{c}_L\gamma_\mu c_L) & \text{C} \\ \text{CVLR\_sdcc} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{c}_R\gamma_\mu c_R) & \text{C} \\ \text{CVRL\_sdcc} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{c}_L\gamma_\mu c_L) & \text{C} \\ \text{CVRR\_sdcc} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{c}_R\gamma_\mu c_R) & \text{C} \\ \end{array}$	CTRRt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha\sigma^{\mu u}s_R^eta)(ar{u}_L^eta\sigma_{\mu u}u_R^lpha)$	$\mathbf{C}$
$\begin{array}{ccc} \text{CVLR\_sdcc} & \frac{4\breve{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^\mu s_L)(\bar{c}_R\gamma_\mu c_R) & \text{C} \\ \text{CVRL\_sdcc} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{c}_L\gamma_\mu c_L) & \text{C} \\ \text{CVRR\_sdcc} & \frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{c}_R\gamma_\mu c_R) & \text{C} \end{array}$	CVLL_sdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{c}_L\gamma_\mu c_L)$	$\mathbf{C}$
$\begin{array}{ll} \text{CVRL\_sdcc} & \frac{4\bar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{c}_L\gamma_\mu c_L) & \text{C} \\ \text{CVRR\_sdcc} & \frac{4\bar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{c}_R\gamma_\mu c_R) & \text{C} \end{array}$	CVLR_sdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{c}_R\gamma_\mu c_R)$	$\mathbf{C}$
CVRR_sdcc $\frac{4\bar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^{\mu}s_R)(\bar{c}_R\gamma_{\mu}c_R)$ C	CVRL_sdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{c}_L\gamma_\mu c_L)$	$\mathbf{C}$
	CVRR_sdcc	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{c}_R\gamma_\mu c_R)$	$^{\mathrm{C}}$

WC name	Operator	Type
CSLL_sdcc	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R s_L)(\bar{c}_R c_L)$	C
CSLR_sdcc	$rac{4ar{G}_F^2}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{c}_Lc_R)$	$\mathbf{C}$
CSRL_sdcc	$\frac{4\check{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{c}_Rc_L)$	$\mathbf{C}$
CSRR_sdcc	$\frac{4\ddot{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{c}_Lc_R)$	$\mathbf{C}$
CTLL_sdcc	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\sigma^{\mu u}s_L)(\bar{c}_R\sigma_{\mu u}c_L)$	$\mathbf{C}$
CTRR_sdcc	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_R)(\bar{c}_L\sigma_{\mu\nu}c_R)$	$^{\mathrm{C}}$
CVLLt_sdcc	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{\alpha}\gamma^{\mu}s_L^{\beta})(\bar{c}_L^{\beta}\gamma_{\mu}c_L^{\alpha})$	$\mathbf{C}$
CVLRt_sdcc	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^{lpha}\gamma^{\mu}s_L^{eta})(\bar{c}_R^{eta}\gamma_{\mu}c_R^{lpha})$	$\mathbf{C}$
CVRLt_sdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\gamma^\mu s_R^eta)(ar{c}_L^eta\gamma_\mu c_L^lpha)$	$\mathbf{C}$
CVRRt_sdcc	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\gamma^\mu s_R^eta)(ar{c}_R^eta\gamma_\mu c_R^lpha)$	$\mathbf{C}$
CSLLt_sdcc	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{c}_R^eta c_L^lpha)$	$\mathbf{C}$
CSLRt_sdcc	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^{lpha}s_L^{eta})(ar{c}_L^{eta}c_R^{lpha})$	$\mathbf{C}$
CSRLt_sdcc	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{c}_R^eta c_L^lpha)$	$\mathbf{C}$
CSRRt_sdcc	$rac{4G_F^c}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{c}_L^eta c_R^lpha)$	$\mathbf{C}$
CTLLt_sdcc	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\sigma^{\mu u}s_L^eta)(ar{c}_R^eta\sigma_{\mu u}c_L^lpha)$	$\mathbf{C}$
CTRRt_sdcc	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha\sigma^{\mu\nu}s_R^{\bar{\beta}})(\bar{c}_L^{\bar{\beta}}\sigma_{\mu\nu}c_R^\alpha)$	C

#### sdnunu

WC name	Operator	Type
CL_sdnuenue	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L) (\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_e)$	С
${\tt CL\_sdnumunumu}$	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CL_sdnutaunutau	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CL_sdnuenumu	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CL_sdnumunue	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CL_sdnumunutau	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CL_sdnutaunumu	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CL_sdnuenutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CL_sdnutaunue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CR_sdnuenue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_sdnumunumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_sdnutaunutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CR_sdnuenumu	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_sdnumunue	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$

WC name	Operator	Type
CR_sdnumunutau	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	С
CR_sdnutaunumu	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^\mu d_R)(\bar{\nu}_\mu\gamma_\mu(1-\gamma_5)\nu_ au)$	$\mathbf{C}$
CR_sdnuenutau	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R) (\bar{\nu}_\tau \gamma_\mu (1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_sdnutaunue	$\frac{\sqrt{4G_F}}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R) (\bar{\nu}_e \gamma_\mu (1 - \gamma_5) \nu_\tau)$	$\mathbf{C}$

## db

WC name	Operator	Type
C9_bdee	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{e}\gamma_{\mu}e)$	С
C9p_bdee	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{R}\gamma^{\mu}b_{R})(\bar{e}\gamma_{\mu}e)$	$\mathbf{C}$
C10_bdee	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{L}\gamma^{\mu}b_{L})(\bar{e}\gamma_{\mu}\gamma_{5}e)$	$\mathbf{C}$
C10p_bdee	$rac{4 \tilde{G_F}}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_R \gamma^\mu b_R) (ar{e} \gamma_\mu \gamma_5 e)$	$\mathbf{C}$
CS_bdee	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{L}b_{R})(\bar{e}e)$	$\mathbf{C}$
CSp_bdee	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{e}e)$	$\mathbf{C}$
CP_bdee	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{L}b_{R})(\bar{e}\gamma_{5}e)$	$\mathbf{C}$
CPp_bdee	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{R}b_{L})(\bar{e}\gamma_{5}e)$	$\mathbf{C}$
C9_bdmumu	$\frac{4\ddot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{L}\gamma^{\mu}b_{L})(\bar{\mu}\gamma_{\mu}\mu)$	$\mathbf{C}$
C9p_bdmumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^* \frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\mu}\gamma_{\mu}\mu)$	$\mathbf{C}$
C10_bdmumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\mu}\gamma_{\mu}\gamma_5\mu)$	$\mathbf{C}$
C10p_bdmumu	$rac{4 \ddot{G}_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu b_R) (ar{\mu} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
CS_bdmumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\mu}\mu)$	$\mathbf{C}$
CSp_bdmumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\mu}\mu)$	$\mathbf{C}$
CP_bdmumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\mu}\gamma_5\mu)$	$\mathbf{C}$
CPp_bdmumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\mu}\gamma_5\mu)$	$\mathbf{C}$
C9_bdtautau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}b_L)(ar{ au}\gamma_{\mu} au)$	$\mathbf{C}$
C9p_bdtautau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^{\mu}b_R)(ar{ au}\gamma_{\mu} au)$	$\mathbf{C}$
C10_bdtautau	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}rac{e^{2}}{16\pi^{2}}(ar{d}_{L}\gamma^{\mu}b_{L})(ar{ au}\gamma_{\mu}\gamma_{5} au)$	$\mathbf{C}$
C10p_bdtautau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^{\mu}b_R)(ar{ au}\gamma_{\mu}\gamma_5 au)$	$\mathbf{C}$
CS_bdtautau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{ au} au)$	$\mathbf{C}$
CSp_bdtautau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\tau}\tau)$	$\mathbf{C}$
CP_bdtautau	$rac{4rac{Q_F}{\sqrt{2}}}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Lb_R)(ar{ au}\gamma_5 au)$	$\mathbf{C}$
CPp_bdtautau	$rac{4Q_F^2}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Rb_L)(ar{ au}\gamma_5 au)$	$\mathbf{C}$
C7_bd	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e}{16\pi^2}m_b(\bar{d}_L\sigma^{\mu\nu}b_R)F_{\mu\nu}$	$\mathbf{C}$
C7p_bd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^* \frac{e}{16\pi^2} m_b (\bar{d}_R \sigma^{\mu\nu} b_L) F_{\mu\nu}$	$^{\mathrm{C}}$

WC name	Operator	Type
C8_bd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{g_s}{16\pi^2}m_b(\bar{d}_L\sigma^{\mu\nu}T^ab_R)G_{\mu\nu}^a$	С
C8p_bd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^* \frac{g_s}{16\pi^2} m_b (\bar{d}_R \sigma^{\mu\nu} T^a b_L) G_{\mu\nu}^a$	$^{\mathrm{C}}$
CVLL_bdbb	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_L\gamma^\mu b_L)(b_L\gamma_\mu b_L)$	$^{\mathrm{C}}$
CVLR_bdbb	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L\gamma^\mu b_L)(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
CVRL_bdbb	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\gamma^\mu b_R)(ar{b}_L\gamma_\mu b_L)$	$\mathbf{C}$
CVRR_bdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\gamma^\mu b_R)(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
CSLL_bdbb	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{b}_Rb_L)$	$\mathbf{C}$
CSLR_bdbb	$rac{4\overset{\circ}{G_F}}{\overset{\sim}{\sim}^2}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{b}_Lb_R)$	$\mathbf{C}$
CSRL_bdbb	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_Lb_R)(b_Rb_L)$	$\mathbf{C}$
CSRR_bdbb	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Lb_R)(ar{b}_Lb_R)$	$\mathbf{C}$
CTLL_bdbb	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\sigma^{\mu u}b_L)(ar{b}_R\sigma_{\mu u}b_L)$	$\mathbf{C}$
CTRR_bdbb	$rac{4 G_F}{\sqrt{2}} V_{tb} V_{td}^* (ar{d}_L \sigma^{\mu  u} b_R) (ar{b}_L \sigma_{\mu  u} b_R)$	$\mathbf{C}$
CVLL_bddd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_L\gamma^\mu b_L)(d_L\gamma_\mu d_L)$	$\mathbf{C}$
CVLR_bddd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L\gamma^\mu b_L)(ar{d}_R\gamma_\mu d_R)$	$\mathbf{C}$
CVRL_bddd	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\gamma^\mu b_R)(ar{d}_L\gamma_\mu d_L)$	$\mathbf{C}$
CVRR_bddd	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\gamma^\mu b_R)(ar{d}_R\gamma_\mu d_R)$	$\mathbf{C}$
CSLL_bddd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{d}_Rd_L)$	$\mathbf{C}$
CSLR_bddd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_Rb_L)(d_Ld_R)$	$\mathbf{C}$
CSRL_bddd	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_Lb_R)(d_Rd_L)$	$\mathbf{C}$
CSRR_bddd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Lb_R)(ar{d}_Ld_R)$	$\mathbf{C}$
CTLL_bddd	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\sigma^{\mu u}b_L)(ar{d}_R\sigma_{\mu u}d_L)$	$\mathbf{C}$
CTRR_bddd	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L\sigma^{\mu u}b_R)(ar{d}_L\sigma_{\mu u}d_R)$	$\mathbf{C}$
CVLL_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L\gamma^\mu b_L)(ar{s}_L\gamma_\mu s_L)$	$\mathbf{C}$
CVLR_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_L\gamma^\mu b_L)(\bar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CVRL_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\gamma^\mu b_R)(ar{s}_L\gamma_\mu s_L)$	$\mathbf{C}$
CVRR_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\gamma^\mu b_R)(ar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CSLL_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{s}_Rs_L)$	$\mathbf{C}$
CSLR_bdss	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{s}_Ls_R)$	$\mathbf{C}$
CSRL_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Lb_R)(ar{s}_Rs_L)$	$\mathbf{C}$
CSRR_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Lb_R)(ar{s}_Ls_R)$	$\mathbf{C}$
CTLL_bdss	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\sigma^{\mu u}b_L)(ar{s}_R\sigma_{\mu u}s_L)$	$\mathbf{C}$
CTRR_bdss	$\frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_R\sigma^{\mu\nu}b_L)(\bar{s}_R\sigma_{\mu\nu}s_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}b_R)(\bar{s}_L\sigma_{\mu\nu}s_R)}$	$\mathbf{C}$
CVLLt_bdss	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha\gamma^\mu b_L^eta)(ar{s}_L^eta\gamma_\mu s_L^lpha)$	$\mathbf{C}$
CVLRt_bdss	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L^lpha\gamma^\mu b_L^eta)(\bar{s}_R^eta\gamma_\mu s_R^lpha)$	$^{\mathrm{C}}$
CVRLt_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha\gamma^\mu b_R^eta)(ar{s}_L^eta\gamma_\mu s_L^lpha)$	$\mathbf{C}$
CVRRt_bdss	$\frac{{}^{4G_F}_{-}}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_R^{\alpha}\gamma^{\mu}b_R^{\beta})(\bar{s}_R^{\beta}\gamma_{\mu}s_R^{\alpha})$	$\mathbf{C}$

WC name	Operator	Type
CSLLt_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha b_L^eta)(ar{s}_R^eta s_L^lpha)$	$\mathbf{C}$
CSLRt_bdss	$rac{4\overset{\circ}{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^{lpha}b_L^{eta})(ar{s}_L^{eta}s_R^{lpha})$	$\mathbf{C}$
CSRLt_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha b_R^eta)(ar{s}_R^eta s_L^lpha)$	$\mathbf{C}$
CSRRt_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha b_R^eta)(ar{s}_L^eta s_R^lpha)$	$\mathbf{C}$
CTLLt_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha\sigma^{\mu u}b_L^eta)(ar{s}_R^eta\sigma_{\mu u}s_L^lpha)$	$\mathbf{C}$
CTRRt_bdss	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha\sigma^{\mu u}b_R^{eta})(ar{s}_L^eta\sigma_{\mu u}s_R^lpha)$	$\mathbf{C}$
CVLL_bduu	$\frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\gamma^{\mu}b_L)(\bar{u}_L\gamma_{\mu}u_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\gamma^{\mu}b_L)(\bar{u}_R\gamma_{\mu}u_R)}$	$\mathbf{C}$
CVLR_bduu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\gamma^\mu b_L)(\bar{u}_R\gamma_\mu u_R)$	$\mathbf{C}$
CVRL_bduu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_R\gamma^\mu b_R)(\bar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
CVRR_bduu	$\frac{\frac{4\ddot{G}_{F}^{r}}{\sqrt{2}}V_{tb}V_{td}^{*}(\bar{d}_{R}\gamma^{\mu}b_{R})(\bar{u}_{R}\gamma_{\mu}u_{R})}{\frac{4\ddot{G}_{F}^{r}}{\sqrt{2}}V_{tb}V_{td}^{*}(\bar{d}_{R}b_{L})(\bar{u}_{R}u_{L})}$	$\mathbf{C}$
CSLL_bduu	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_Rb_L)(\bar{u}_Ru_L)$	$\mathbf{C}$
CSLR_bduu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_Rb_L)(\bar{u}_Lu_R)$	$\mathbf{C}$
CSRL_bduu	$rac{4reve{Q_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L b_R)(ar{u}_R u_L)$	$^{\mathrm{C}}$
CSRR_bduu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(d_Lb_R)(\bar{u}_Lu_R)$	$\mathbf{C}$
CTLL_bduu	$\frac{\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_R\sigma^{\mu\nu}b_L)(\bar{u}_R\sigma_{\mu\nu}u_L)}{\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}b_R)(\bar{u}_L\sigma_{\mu\nu}u_R)}$	$\mathbf{C}$
CTRR_bduu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}b_R)(\bar{u}_L\sigma_{\mu\nu}u_R)$	$^{\mathrm{C}}$
CVLLt_bduu	$\frac{4\widetilde{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L^{\alpha}\gamma^{\mu}b_L^{\beta})(\bar{u}_L^{\beta}\gamma_{\mu}u_L^{\alpha})$	$\mathbf{C}$
CVLRt_bduu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha\gamma^\mu b_L^eta)(ar{u}_R^eta\gamma_\mu u_R^lpha)$	$\mathbf{C}$
CVRLt_bduu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha\gamma^\mu b_R^eta)(ar{u}_L^eta\gamma_\mu u_L^lpha)$	$\mathbf{C}$
CVRRt_bduu	$rac{4G_F^c}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha\gamma^\mu b_R^eta)(ar{u}_R^eta\gamma_\mu u_R^lpha)$	$\mathbf{C}$
CSLLt_bduu	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha b_L^eta)(ar{u}_R^eta u_L^lpha)$	$\mathbf{C}$
CSLRt_bduu	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha b_L^eta)(ar{u}_L^eta u_R^lpha)$	$\mathbf{C}$
CSRLt_bduu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha b_R^eta)(ar{u}_R^eta u_L^lpha)$	$\mathbf{C}$
CSRRt_bduu	$rac{4G_F^c}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha b_R^eta)(ar{u}_L^eta u_R^lpha)$	$\mathbf{C}$
CTLLt_bduu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_R^{lpha}\sigma^{\mu u}b_L^{eta})(\bar{u}_R^{eta}\sigma_{\mu u}u_L^{lpha})$	$^{\mathrm{C}}$
CTRRt_bduu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha\sigma^{\mu u}b_R^eta)(ar{u}_L^eta\sigma_{\mu u}u_R^lpha)$	$^{\mathrm{C}}$
CVLL_bdcc	$\frac{4\widetilde{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L\gamma^\mu b_L)(\bar{c}_L\gamma_\mu c_L)$	$^{\mathrm{C}}$
CVLR_bdcc	$rac{4Q_F^2}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L\gamma^\mu b_L)(ar{c}_R\gamma_\mu c_R)$	$^{\mathrm{C}}$
CVRL_bdcc	$4G_F V \cdot V * (d - \alpha \mu b - )(\bar{a} - \alpha \mu c - c)$	$\mathbf{C}$
CVRR_bdcc	$\begin{array}{l} \frac{\sqrt{2}}{\sqrt{2}} V_{tb} V_{td} (\bar{d}_R \gamma^{\mu} b_R) (\bar{c}_L \gamma_{\mu} c_L) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_R \gamma^{\mu} b_R) (\bar{c}_R \gamma_{\mu} c_R) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_R b_L) (\bar{c}_R c_L) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_L b_R) (\bar{c}_L c_R) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_L b_R) (\bar{c}_R c_L) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_L b_R) (\bar{c}_L c_R) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} b_L) (\bar{c}_R \sigma_{\mu\nu} c_L) \\ \frac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} b_R) (\bar{c}_L \sigma_{\mu\nu} c_R) \end{array}$	$\mathbf{C}$
CSLL_bdcc	$rac{4ar{G}_F^c}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{c}_Rc_L)$	$\mathbf{C}$
CSLR_bdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Rb_L)(ar{c}_Lc_R)$	$\mathbf{C}$
CSRL_bdcc	$rac{4reve{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Lb_R)(ar{c}_Rc_L)$	$\mathbf{C}$
CSRR_bdcc	$rac{4reve{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_Lb_R)(ar{c}_Lc_R)$	$\mathbf{C}$
CTLL_bdcc	$rac{4reve{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R\sigma^{\mu u}b_L)(ar{c}_R\sigma_{\mu u}c_L)$	$\mathbf{C}$
CTRR_bdcc	$\frac{4\ddot{G}_{F}}{\sqrt{c}}V_{th}V_{td}^{*}(\bar{d}_{L}\sigma^{\mu\nu}b_{R})(\bar{c}_{L}\sigma_{\mu\nu}c_{R})$	$^{\mathrm{C}}$

WC name	Operator	Type
CVLLt_bdcc	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^{lpha}\gamma^{\mu}b_L^{eta})(ar{c}_L^{eta}\gamma_{\mu}c_L^{lpha})$	C
CVLRt_bdcc	$rac{4reve{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha\gamma^\mu b_L^eta)(ar{c}_R^eta\gamma_\mu c_R^lpha)$	$\mathbf{C}$
CVRLt_bdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha\gamma^\mu b_R^eta)(ar{c}_L^eta\gamma_\mu c_L^lpha)$	$\mathbf{C}$
CVRRt_bdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha\gamma^\mu b_R^eta)(ar{c}_R^eta\gamma_\mu c_R^lpha)$	$\mathbf{C}$
CSLLt_bdcc	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha b_L^eta)(ar{c}_R^eta c_L^lpha)$	$\mathbf{C}$
CSLRt_bdcc	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_R^lpha b_L^eta)(ar{c}_L^eta c_R^lpha)$	$\mathbf{C}$
CSRLt_bdcc	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha b_R^eta)(ar{c}_R^eta c_L^lpha)$	$\mathbf{C}$
CSRRt_bdcc	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*(ar{d}_L^lpha b_R^eta)(ar{c}_L^eta c_R^lpha)$	$\mathbf{C}$
CTLLt_bdcc	$rac{4 \dot{G}_F}{\sqrt{2}} V_{tb} V_{td}^* (ar{d}_R^lpha \sigma^{\mu u} b_L^eta) (ar{c}_R^eta \sigma_{\mu u} c_L^lpha)$	$\mathbf{C}$
CTRRt_bdcc	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*(\bar{d}_L^\alpha\sigma^{\mu\nu}b_R^\beta)(\bar{c}_L^\beta\sigma_{\mu\nu}c_R^\alpha)$	$\mathbf{C}$

## dbnunu

WC name	Operator	Type
CL_bdnuenue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_e)$	C
${\tt CL\_bdnumunumu}$	$rac{4 V_{GF}^{2}}{\sqrt{2}} V_{tb} V_{td}^{*} rac{e^{2}}{16\pi^{2}} (\bar{d}_{L} \gamma^{\mu} b_{L}) (\bar{\nu}_{\mu} \gamma_{\mu} (1 - \gamma_{5}) \nu_{\mu})$	$\mathbf{C}$
${\tt CL\_bdnutaunutau}$	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CL_bdnuenumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CL_bdnumunue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
${\tt CL\_bdnumunutau}$	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$^{\mathrm{C}}$
${\tt CL\_bdnutaunumu}$	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{ au})$	$^{\mathrm{C}}$
CL_bdnuenutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CL_bdnutaunue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{ au})$	$\mathbf{C}$
CR_bdnuenue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_e)$	$^{\mathrm{C}}$
${\tt CR\_bdnumunumu}$	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_bdnutaunutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	$\mathbf{C}$
CR_bdnuenumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_bdnumunue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_bdnumunutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
CR_bdnutaunumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{ au})$	$\mathbf{C}$
CR_bdnuenutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
CR_bdnutaunue	$rac{4 G_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu b_R) (ar{ u}_e \gamma_\mu (1 - \gamma_5)  u_ au)$	$\mathbf{C}$

#### sbmue

WC name	Operator	Type
C9_bsemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L)(\bar{\mu}\gamma_{\mu} e)$	$\mathbf{C}$
C9p_bsemu	$rac{4 G_F^2}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16 \pi^2} (\bar{s}_R \gamma^\mu b_R) (\bar{\mu} \gamma_\mu e)$	$^{\mathrm{C}}$
C10_bsemu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^{\mu}b_L)(ar{\mu}\gamma_{\mu}\gamma_5 e)$	$\mathbf{C}$
C10p_bsemu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^{\mu}b_R)(ar{\mu}\gamma_{\mu}\gamma_5 e)$	$^{\mathrm{C}}$
CS_bsemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{\mu}e)$	$\mathbf{C}$
CSp_bsemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\mu}e)$	$\mathbf{C}$
CP_bsemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{\mu}\gamma_5e)$	$\mathbf{C}$
CPp_bsemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\mu}\gamma_5 e)$	С

#### sbemu

WC name	Operator	Type
C9_bsmue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L) (\bar{e} \gamma_{\mu} \mu)$	C
C9p_bsmue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^{\mu}b_R)(ar{e}\gamma_{\mu}\mu)$	$\mathbf{C}$
C10_bsmue	$rac{4 \check{G}_F}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16\pi^2} (ar{s}_L \gamma^\mu b_L) (ar{e} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
C10p_bsmue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^\mu b_R)(ar{e}\gamma_\mu\gamma_5\mu)$	$\mathbf{C}$
CS_bsmue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{e}\mu)$	$\mathbf{C}$
CSp_bsmue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}m_b(\bar{s}_R b_L)(\bar{e}\mu)$	$\mathbf{C}$
CP_bsmue	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Lb_R)(ar{e}\gamma_5\mu)$	$\mathbf{C}$
CPp_bsmue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Rb_L)(ar{e}\gamma_5\mu)$	$\mathbf{C}$

#### sbtaue

WC name	Operator	Type
C9_bsetau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^{\mu}b_L)(ar{ au}\gamma_{\mu}e)$	С
C9p_bsetau	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}rac{e^{2}}{16\pi^{2}}(ar{s}_{R}\gamma^{\mu}b_{R})(ar{ au}\gamma_{\mu}e)$	$\mathbf{C}$
C10_bsetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{\tau}\gamma_{\mu}\gamma_5 e)$	$\mathbf{C}$
C10p_bsetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\tau}\gamma_{\mu}\gamma_5 e)$	$\mathbf{C}$
CS_bsetau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{\tau}e)$	$\mathbf{C}$
CSp_bsetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}m_b(\bar{s}_R b_L)(\bar{\tau}e)$	$^{\mathrm{C}}$
CP_bsetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}m_b(\bar{s}_L b_R)(\bar{\tau}\gamma_5 e)$	$\mathbf{C}$

WC name	Operator	Type
CPp_bsetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\tau}\gamma_5 e)$	С

#### sbetau

WC name	Operator	Type
C9_bstaue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L) (\bar{e}\gamma_{\mu}  au)$	$\mathbf{C}$
C9p_bstaue	$\frac{4 \tilde{G}_F}{\sqrt{2}} V_{tb} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^{\mu} b_R) (\bar{e} \gamma_{\mu}  au)$	$\mathbf{C}$
C10_bstaue	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_L\gamma^\mu b_L)(ar{e}\gamma_\mu\gamma_5 au)$	$\mathbf{C}$
C10p_bstaue	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^\mu b_R)(ar{e}\gamma_\mu\gamma_5 au)$	$\mathbf{C}$
CS_bstaue	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}rac{e^{2}}{16\pi^{2}}m_{b}(ar{s}_{L}b_{R})(ar{e} au)$	$\mathbf{C}$
CSp_bstaue	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Rb_L)(ar{e} au)$	$\mathbf{C}$
CP_bstaue	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Lb_R)(ar{e}\gamma_5 au)$	$\mathbf{C}$
CPp_bstaue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{e}\gamma_5\tau)$	C

#### sbtaumu

WC name	Operator	Type
C9_bsmutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L)(\bar{\tau} \gamma_{\mu} \mu)$	C
C9p_bsmutau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^{\mu}b_R)(ar{ au}\gamma_{\mu}\mu)$	$\mathbf{C}$
C10_bsmutau	$rac{4 { m G}_F}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16 \pi^2} (ar{s}_L \gamma^\mu b_L) (ar{ au} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
C10p_bsmutau	$rac{4 { m G}_F}{\sqrt{2}} V_{tb} V_{ts}^* rac{e^2}{16 \pi^2} (ar{s}_R \gamma^\mu b_R) (ar{ au} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
CS_bsmutau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Lb_R)(ar{ au}\mu)$	$\mathbf{C}$
CSp_bsmutau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Rb_L)(ar{ au}\mu)$	$\mathbf{C}$
CP_bsmutau	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}m_b(ar{s}_Lb_R)(ar{ au}\gamma_5\mu)$	$\mathbf{C}$
CPp_bsmutau	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{s}_{R}b_{L})(\bar{\tau}\gamma_{5}\mu)$	C

#### ${\tt sbmutau}$

WC name	Operator	Type
C9_bstaumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L)(\bar{\mu} \gamma_{\mu}  au)$	C
C9p_bstaumu	$\frac{\sqrt{2}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{s}_{R}\gamma^{\mu}b_{R})(\bar{\mu}\gamma_{\mu}\tau)$	$\mathbf{C}$
C10_bstaumu	$\frac{4\overrightarrow{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\overline{s}_L\gamma^\mu b_L)(\overline{\mu}\gamma_\mu\gamma_5\tau)$	$\mathbf{C}$

WC name	Operator	Type
C10p_bstaumu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*rac{e^2}{16\pi^2}(ar{s}_R\gamma^{\mu}b_R)(ar{\mu}\gamma_{\mu}\gamma_5 au)$	C
CS_bstaumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{\mu} au)$	$\mathbf{C}$
CSp_bstaumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\mu} au)$	$\mathbf{C}$
CP_bstaumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{\mu}\gamma_5 au)$	$\mathbf{C}$
CPp_bstaumu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_R b_L)(\bar{\mu}\gamma_5  au)$	$\mathbf{C}$

## ${\tt dbmue}$

WC name	Operator	Type
C9_bdemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{\mu}\gamma_{\mu}e)$	$\mathbf{C}$
C9p_bdemu	$rac{4 ar{G_F}}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu b_R) (ar{\mu} \gamma_\mu e)$	$\mathbf{C}$
C10_bdemu	$rac{4 ar{G_F}}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_L \gamma^\mu b_L) (ar{\mu} \gamma_\mu \gamma_5 e)$	$\mathbf{C}$
C10p_bdemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\mu}\gamma_{\mu}\gamma_5 e)$	$\mathbf{C}$
CS_bdemu	$\frac{4\ddot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\mu}e)$	$\mathbf{C}$
CSp_bdemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\mu}e)$	$\mathbf{C}$
CP_bdemu	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\mu}\gamma_5e)$	$\mathbf{C}$
CPp_bdemu	$\frac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{R}b_{L})(\bar{\mu}\gamma_{5}e)$	$\mathbf{C}$

## dbemu

WC name	Operator	Type
C9_bdmue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}b_L)(\bar{e}\gamma_{\mu}\mu)$	$^{\mathrm{C}}$
C9p_bdmue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^\mu b_R)(ar{e}\gamma_\mu\mu)$	$\mathbf{C}$
C10_bdmue	$rac{4ar{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}rac{e^{2}}{16\pi^{2}}(ar{d}_{L}\gamma^{\mu}b_{L})(ar{e}\gamma_{\mu}\gamma_{5}\mu)$	$\mathbf{C}$
C10p_bdmue	$rac{4ar{G}_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^\mu b_R)(ar{e}\gamma_\mu\gamma_5\mu)$	$\mathbf{C}$
CS_bdmue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Lb_R)(ar{e}\mu)$	$\mathbf{C}$
CSp_bdmue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{e}\mu)$	$\mathbf{C}$
CP_bdmue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Lb_R)(ar{e}\gamma_5\mu)$	$\mathbf{C}$
CPp_bdmue	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{e}\gamma_5\mu)$	$\mathbf{C}$

## dbtaue

WC name	Operator	Type
C9_bdetau	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}b_L)(ar{ au}\gamma_{\mu}e)$	C
C9p_bdetau	$rac{4ar{G_F}}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^{\mu}b_R)(ar{ au}\gamma_{\mu}e)$	$\mathbf{C}$
C10_bdetau	$rac{4 \overset{.}{G_F}}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_L \gamma^\mu b_L) (ar{ au} \gamma_\mu \gamma_5 e)$	$^{\mathrm{C}}$
C10p_bdetau	$rac{4 \overleftarrow{G_F}}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu b_R) (ar{ au} \gamma_\mu \gamma_5 e)$	$\mathbf{C}$
CS_bdetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\tau}e)$	$\mathbf{C}$
CSp_bdetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\tau}e)$	$^{\mathrm{C}}$
CP_bdetau	$rac{4 G_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16 \pi^2} m_b (\bar{d}_L b_R) (\bar{ au} \gamma_5 e)$	$^{\mathrm{C}}$
CPp_bdetau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\tau}\gamma_5e)$	С

#### dbetau

WC name	Operator	Type
C9_bdtaue	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}b_L)(ar{e}\gamma_{\mu} au)$	C
C9p_bdtaue	$rac{4 { m G}_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu b_R) (ar{e} \gamma_\mu  au)$	$^{\mathrm{C}}$
C10_bdtaue	$rac{4ar{V_F}}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^\mu b_L)(ar{e}\gamma_\mu\gamma_5 au)$	$\mathbf{C}$
C10p_bdtaue	$rac{4 \dot{G}_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu b_R) (ar{e} \gamma_\mu \gamma_5  au)$	$^{\mathrm{C}}$
CS_bdtaue	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Lb_R)(ar{e} au)$	$\mathbf{C}$
CSp_bdtaue	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}rac{e^{2}}{16\pi^{2}}m_{b}(ar{d}_{R}b_{L})(ar{e} au)$	$\mathbf{C}$
CP_bdtaue	$rac{4 \dot{G}_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} m_b (ar{d}_L b_R) (ar{e} \gamma_5  au)$	$^{\mathrm{C}}$
CPp_bdtaue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{e}\gamma_5\tau)$	C

## ${\tt dbtaumu}$

WC name	Operator	Type
C9_bdmutau	$rac{4G_F}{\sqrt{2}} V_{tb} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_L \gamma^\mu b_L) (ar{ au} \gamma_\mu \mu)$	C
C9p_bdmutau	$\frac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{R}\gamma^{\mu}b_{R})(\bar{\tau}\gamma_{\mu}\mu)$	$\mathbf{C}$
C10_bdmutau	$\frac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{L}\gamma^{\mu}b_{L})(\bar{\tau}\gamma_{\mu}\gamma_{5}\mu)$	$\mathbf{C}$
C10p_bdmutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}b_R)(\bar{\tau}\gamma_{\mu}\gamma_5\mu)$	$\mathbf{C}$
CS_bdmutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{ au}\mu)$	$\mathbf{C}$
CSp_bdmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\tau}\mu)$	$\mathbf{C}$
CP_bdmutau	$\frac{4\ddot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\tau}\gamma_5\mu)$	$\mathbf{C}$
CPp_bdmutau	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\tau}\gamma_5\mu)$	$\mathbf{C}$

## ${\tt dbmutau}$

WC name	Operator	Type
C9_bdtaumu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}b_L)(ar{\mu}\gamma_{\mu} au)$	С
C9p_bdtaumu	$\frac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{d}_{R}\gamma^{\mu}b_{R})(\bar{\mu}\gamma_{\mu}\tau)$	$\mathbf{C}$
C10_bdtaumu	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}rac{e^{2}}{16\pi^{2}}(ar{d}_{L}\gamma^{\mu}b_{L})(ar{\mu}\gamma_{\mu}\gamma_{5} au)$	$\mathbf{C}$
C10p_bdtaumu	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{td}^{*}rac{e^{2}}{16\pi^{2}}(ar{d}_{R}\gamma^{\mu}b_{R})(ar{\mu}\gamma_{\mu}\gamma_{5} au)$	$\mathbf{C}$
CS_bdtaumu	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Lb_R)(ar{\mu} au)$	$\mathbf{C}$
CSp_bdtaumu	$rac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(ar{d}_Rb_L)(ar{\mu} au)$	$\mathbf{C}$
CP_bdtaumu	$rac{4G_F}{\sqrt{2}}V_{tb}V_{td}^*rac{e^2}{16\pi^2}m_b(\bar{d}_Lb_R)(\bar{\mu}\gamma_5 au)$	$\mathbf{C}$
CPp_bdtaumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rb_L)(\bar{\mu}\gamma_5\tau)$	С

#### sdemu

WC name	Operator	Type
C9_sdemu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}s_L)(ar{\mu}\gamma_{\mu}e)$	$\mathbf{C}$
C9p_sdemu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}s_R)(\bar{\mu}\gamma_{\mu}e)$	$\mathbf{C}$
C10_sdemu	$rac{4 \overleftarrow{G_F}}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_L \gamma^\mu s_L) (ar{\mu} \gamma_\mu \gamma_5 e)$	$\mathbf{C}$
C10p_sdemu	$rac{4 \dot{G}_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_R \gamma^\mu s_R) (ar{\mu} \gamma_\mu \gamma_5 e)$	$\mathbf{C}$
CS_sdemu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{\mu}e)$	$\mathbf{C}$
CSp_sdemu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{\mu}e)$	$\mathbf{C}$
CP_sdemu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{\mu}\gamma_5 e)$	$\mathbf{C}$
CPp_sdemu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{\mu}\gamma_5 e)$	$\mathbf{C}$

## sdmue

WC name	Operator	Type
C9_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}s_L)(\bar{e}\gamma_{\mu}\mu)$	С
C9p_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}s_R)(\bar{e}\gamma_{\mu}\mu)$	$\mathbf{C}$
C10_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_L\gamma^{\mu}s_L)(\bar{e}\gamma_{\mu}\gamma_5\mu)$	$\mathbf{C}$
C10p_sdmue	$rac{4 \ddot{G}_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu s_R) (ar{e} \gamma_\mu \gamma_5 \mu)$	$\mathbf{C}$
CS_sdmue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{e}\mu)$	$\mathbf{C}$
CSp_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rs_L)(\bar{e}\mu)$	$\mathbf{C}$
CP_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{e}\gamma_5\mu)$	$\mathbf{C}$

WC name	Operator	Type
CPp_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{e}\gamma_5\mu)$	С

#### sdetau

WC name	Operator	Type
C9_sdetau	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}s_L)(ar{ au}\gamma_{\mu}e)$	C
C9p_sdetau	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^\mu s_R)(ar{ au}\gamma_\mu e)$	$^{\mathrm{C}}$
C10_sdetau	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^\mu s_L)(ar{ au}\gamma_\mu\gamma_5 e)$	$^{\mathrm{C}}$
C10p_sdetau	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^\mu s_R)(ar{ au}\gamma_\mu\gamma_5 e)$	$^{\mathrm{C}}$
CS_sdetau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{ au}e)$	$^{\mathrm{C}}$
CSp_sdetau	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}rac{e^{2}}{16\pi^{2}}m_{b}(ar{d}_{R}s_{L})(ar{ au}e)$	$\mathbf{C}$
CP_sdetau	$rac{4 \dot{G}_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16\pi^2} m_b (\bar{d}_L s_R) (\bar{ au} \gamma_5 e)$	$^{\mathrm{C}}$
CPp_sdetau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{\tau}\gamma_5 e)$	$^{\mathrm{C}}$

#### sdtaue

WC name	Operator	Type
C9_sdtaue	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}s_L)(ar{e}\gamma_{\mu} au)$	C
C9p_sdtaue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}s_R)(\bar{e}\gamma_{\mu} au)$	$\mathbf{C}$
C10_sdtaue	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^\mu s_L)(ar{e}\gamma_\mu\gamma_5 au)$	$\mathbf{C}$
C10p_sdtaue	$rac{4ar{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}rac{e^{2}}{16\pi^{2}}(ar{d}_{R}\gamma^{\mu}s_{R})(ar{e}\gamma_{\mu}\gamma_{5} au)$	$\mathbf{C}$
CS_sdtaue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{e} au)$	$\mathbf{C}$
CSp_sdtaue	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{R}s_{L})(\bar{e} au)$	$\mathbf{C}$
CP_sdtaue	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{L}s_{R})(\bar{e}\gamma_{5}\tau)$	$\mathbf{C}$
CPp_sdtaue	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{d}_{R}s_{L})(\bar{e}\gamma_{5}\tau)$	C

#### ${\tt sdmutau}$

WC name	Operator	Type
C9_sdmutau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_L \gamma^{\mu} s_L) (\bar{\tau} \gamma_{\mu} \mu)$	C
C9p_sdmutau	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_R\gamma^{\mu}s_R)(ar{ au}\gamma_{\mu}\mu)$	$\mathbf{C}$
C10_sdmutau	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}(ar{d}_L\gamma^{\mu}s_L)(ar{ au}\gamma_{\mu}\gamma_{5}\mu)$	$\mathbf{C}$

WC name	Operator	Type
C10p_sdmutau	$rac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16\pi^2} (ar{d}_R \gamma^\mu s_R) (ar{ au} \gamma_\mu \gamma_5 \mu)$	C
CS_sdmutau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{\tau}\mu)$	$\mathbf{C}$
CSp_sdmutau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_Rs_L)(\bar{\tau}\mu)$	$\mathbf{C}$
CP_sdmutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_L s_R)(\bar{\tau}\gamma_5\mu)$	$\mathbf{C}$
CPp_sdmutau	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{\tau}\gamma_5\mu)$	C

## ${\tt sdtaumu}$

WC name	Operator	Type
C9_sdtaumu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}s_L)(\bar{\mu}\gamma_{\mu}\tau)$	$\overline{\mathbf{C}}$
C9p_sdtaumu	$rac{4 { m G}_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_R \gamma^\mu s_R) (ar{\mu} \gamma_\mu  au)$	$\mathbf{C}$
C10_sdtaumu	$rac{4 { m G}_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_L \gamma^\mu s_L) (ar{\mu} \gamma_\mu \gamma_5  au)$	$\mathbf{C}$
C10p_sdtaumu	$rac{4 { m G}_F}{\sqrt{2}} V_{ts} V_{td}^* rac{e^2}{16 \pi^2} (ar{d}_R \gamma^\mu s_R) (ar{\mu} \gamma_\mu \gamma_5  au)$	$\mathbf{C}$
CS_sdtaumu	$\frac{4 { m G}_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16 \pi^2} m_b(ar{d}_L s_R) (ar{\mu}  au)$	$^{\mathrm{C}}$
CSp_sdtaumu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^* \frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{\mu} au)$	$\mathbf{C}$
CP_sdtaumu	$rac{4\dot{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}rac{e^{2}}{16\pi^{2}}m_{b}(ar{d}_{L}s_{R})(ar{\mu}\gamma_{5} au)$	$^{\mathrm{C}}$
CPp_sdtaumu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_b(\bar{d}_R s_L)(\bar{\mu}\gamma_5\tau)$	C

## cbenu

WC name	Operator	Type
CVL_bcenue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L\gamma^{\mu}b_L)(\bar{e}_L\gamma_{\mu}\nu_{eL})$	
CVR_bcenue	$-rac{4rac{arphi_F}{\sqrt{2}}V_{cb}(ar{c}_R\gamma^\mu b_R)(ar{e}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_bcenue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_Lb_R)(\bar{e}_R\nu_{eL})$	$\mathbf{C}$
CSL_bcenue	$-rac{4G_F}{\sqrt{2}}V_{cb}(ar{c}_Rb_L)(ar{e}_R u_{eL})$	$\mathbf{C}$
CT_bcenue	$-rac{4ar{G}_F}{\sqrt{2}}V_{cb}(ar{c}_R\sigma^{\mu u}b_L)(ar{e}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_bcenumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{cb}(ar{c}_L\gamma^\mu b_L)(ar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_bcenumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{cb}(ar{c}_R\gamma^\mu b_R)(ar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_bcenumu	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(\bar{c}_Lb_R)(\bar{e}_R\nu_{\mu L})$	$\mathbf{C}$
CSL_bcenumu	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(\bar{c}_Rb_L)(\bar{e}_R\nu_{\mu L})$	$\mathbf{C}$
CT_bcenumu	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_R\sigma^{\mu\nu}b_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_bcenutau	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L\gamma^\mu b_L)(\bar{e}_L\gamma_\mu  u_{\tau L})$	$\mathbf{C}$
CVR_bcenutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cb}(ar{c}_R\gamma^\mu b_R)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_bcenutau	$-rac{4\overleftarrow{G}_F}{\sqrt{2}}V_{cb}(ar{c}_Lb_R)(ar{e}_R u_{ au L})$	$\mathbf{C}$

WC name	Operator	Type
CSL_bcenutau	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_Rb_L)(\bar{e}_R\nu_{\tau L})$	С
CT_bcenutau	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_Rb_L)(\bar{e}_R\nu_{\tau L}) \\ -\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_R\sigma^{\mu\nu}b_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	$\mathbf{C}$

## ${\tt ubenu}$

WC name	Operator	Type
CVL_buenue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^{\mu}b_L)(\bar{e}_L\gamma_{\mu}\nu_{eL})$	С
CVR_buenue	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^\mu b_R)(\bar{e}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_buenue	$-rac{4\check{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{e}_R u_{eL})$	$\mathbf{C}$
CSL_buenue	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_buenue	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu\nu}b_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{eL})$	$^{\mathrm{C}}$
CVL_buenumu	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^\mu b_L)(\bar{e}_L\gamma_\mu u_{\mu L})$	$^{\mathrm{C}}$
CVR_buenumu	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^\mu b_R)(\bar{e}_L\gamma_\mu\nu_{\mu L})$	$^{\mathrm{C}}$
CSR_buenumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{ub}(ar{u}_Lb_R)(ar{e}_R u_{\mu L})$	$^{\mathrm{C}}$
CSL_buenumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ub}(ar{u}_Rb_L)(ar{e}_R u_{\mu L})$	$\mathbf{C}$
CT_buenumu	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu\nu}b_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	$^{\mathrm{C}}$
CVL_buenutau	$-rac{4ar{G}_F}{\sqrt{2}}V_{ub}(ar{u}_L\gamma^\mu b_L)(ar{e}_L\gamma_\mu u_{ au L})$	$^{\mathrm{C}}$
CVR_buenutau	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^\mu b_R)(\bar{e}_L\gamma_\mu\nu_{\tau L})$	$^{\mathrm{C}}$
CSR_buenutau	$-\frac{4\tilde{G_F}}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{e}_R\nu_{\tau L})$	$^{\mathrm{C}}$
CSL_buenutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{ub}(ar{u}_Rb_L)(ar{e}_R u_{ au L})$	$^{\mathrm{C}}$
CT_buenutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu u}b_L)(\bar{e}_R\sigma_{\mu u} u_{ au L})$	С

## usenu

WC name	Operator	Type
CVL_suenue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^{\mu}s_L)(\bar{e}_L\gamma_{\mu}\nu_{eL})$	C
CVR_suenue	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{eL})$	$^{\mathrm{C}}$
CSR_suenue	$-rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{e}_R  u_{eL})$	$^{\mathrm{C}}$
CSL_suenue	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{e}_R u_{eL})$	$^{\mathrm{C}}$
CT_suenue	$-rac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu u}s_L)(\bar{e}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_suenumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{e}_L\gamma_\mu u_{\mu L})$	$^{\mathrm{C}}$
CVR_suenumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{\mu L})$	$^{\mathrm{C}}$
CSR_suenumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{e}_R  u_{\mu L})$	$\mathbf{C}$
CSL_suenumu	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{us}(\bar{u}_Rs_L)(\bar{e}_R u_{\mu L})$	$\mathbf{C}$
CT_suenumu	$-\frac{4\overleftarrow{\zeta_F}}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu}s_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$

WC name	Operator	Type
CVL_suenutau	$-rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{e}_L\gamma_\mu u_{ au L})$	
CVR_suenutau	$-rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_L\gamma^{\mu}s_L)(ar{e}_L\gamma_{\mu} u_{ au L}) \ -rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_R\gamma^{\mu}s_R)(ar{e}_L\gamma_{\mu} u_{ au L})$	$\mathbf{C}$
CSR_suenutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R \nu_{\tau L})$	$\mathbf{C}$
CSL_suenutau	$-rac{4ar{G_F}}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{e}_R u_{ au L})$	$\mathbf{C}$
CT_suenutau	$-rac{4G_F}{4G_F}V_{us}(ar{u}_Ls_R)(ar{e}_R u_{ au L}) \ -rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{e}_R u_{ au L}) \ -rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{e}_R\sigma_{\mu u} u_{ au L})$	C

#### csenu

WC name	Operator	Type
CVL_scenue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_L\gamma^{\mu}s_L)(\bar{e}_L\gamma_{\mu}\nu_{eL})$	C
CVR_scenue	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_scenue	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{e}_R \nu_{eL})$	$\mathbf{C}$
CSL_scenue	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(\bar{c}_Rs_L)(\bar{e}_R\nu_{eL})$	$\mathbf{C}$
CT_scenue	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(ar{c}_R\sigma^{\mu u}s_L)(ar{e}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_scenumu	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(ar{c}_L\gamma^\mu s_L)(ar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_scenumu	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(\bar{c}_R\gamma^\mu s_R)(\bar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_scenumu	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{e}_R \nu_{\mu L})$	$\mathbf{C}$
CSL_scenumu	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(\bar{c}_Rs_L)(\bar{e}_R u_{\mu L})$	$\mathbf{C}$
CT_scenumu	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(\bar{c}_R\sigma^{\mu\nu}s_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_scenutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(ar{c}_L\gamma^\mu s_L)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_scenutau	$-rac{4\widetilde{G}_F^r}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_scenutau	$-rac{4\widetilde{Q}_F^2}{\sqrt{2}}V_{cs}(ar{c}_L s_R)(ar{e}_R  u_{ au L})$	$\mathbf{C}$
CSL_scenutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{cs}(ar{c}_Rs_L)(ar{e}_R u_{ au L})$	$\mathbf{C}$
CT_scenutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cs}(ar{c}_R\sigma^{\mu u}s_L)(ar{e}_R\sigma_{\mu u} u_{ au L})$	$\mathbf{C}$

## cdenu

WC name	Operator	Type
		<i>J</i> 1
CVL_dcenue	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{eL})$	$^{\mathrm{C}}$
CVR_dcenue	$-\frac{4 \check{G}_F}{\sqrt{2}} V_{cd} (\bar{c}_R \gamma^\mu d_R) (\bar{e}_L \gamma_\mu \nu_{eL})$	$^{\mathrm{C}}$
CSR_dcenue	$-\frac{4G_F}{\bar{c}}V_{cd}(\bar{c}_Id_B)(\bar{e}_B\nu_{cI})$	$^{\mathrm{C}}$
CSL_dcenue	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{cd}(\bar{c}_Rd_L)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_dcenue	$-\frac{4\check{G}_F}{\sqrt{2}}V_{cd}(\bar{c}_R\sigma^{\mu\nu}d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{eL})$	$^{\mathrm{C}}$
CVL_dcenumu	$-rac{4reve{G}_F}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{\mu L})$	$^{\mathrm{C}}$
CVR_dcenumu	$-\frac{\sqrt{2}}{4G_F}V_{cd}(\bar{c}_R d_L)(\bar{e}_R \nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R \sigma^{\mu\nu} d_L)(\bar{e}_R \sigma_{\mu\nu} \nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_L \gamma^{\mu} d_L)(\bar{e}_L \gamma_{\mu} \nu_{\mu L}) \\ -\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R \gamma^{\mu} d_R)(\bar{e}_L \gamma_{\mu} \nu_{\mu L})$	$^{\mathrm{C}}$

WC name	Operator	Type
CSR_dcenumu	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_Ld_R)(\bar{e}_R\nu_{\mu L})$	С
CSL_dcenumu	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_L d_R)(\bar{e}_R \nu_{\mu L}) \\ -\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R d_L)(\bar{e}_R \nu_{\mu L})$	$\mathbf{C}$
CT_dcenumu	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R\sigma^{\mu\nu}d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_dcenutau	$-rac{4G_F^2}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_dcenutau	$-rac{4 \widetilde{G}_F}{\sqrt{2}} V_{cd} (\bar{c}_R \gamma^\mu d_R) (\bar{e}_L \gamma_\mu  u_{ au L})$	$\mathbf{C}$
CSR_dcenutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{cd}(\bar{c}_Ld_R)(\bar{e}_R u_{ au L})$	$\mathbf{C}$
CSL_dcenutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cd}(\bar{c}_Rd_L)(\bar{e}_R u_{ au L})$	$\mathbf{C}$
CT_dcenutau	$-\frac{4\overline{G}_F}{\sqrt{2}}V_{cd}(\bar{c}_R\sigma^{\mu\nu}d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

#### cbmunu

WC name	Operator	Type
CVL_bcmunue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L\gamma^{\mu}b_L)(\bar{\mu}_L\gamma_{\mu}\nu_{eL})$	C
CVR_bcmunue	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cb}(ar{c}_R\gamma^\mu b_R)(ar{\mu}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_bcmunue	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cb}(\bar{c}_Lb_R)(\bar{\mu}_R\nu_{eL})$	$\mathbf{C}$
CSL_bcmunue	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cb}(\bar{c}_Rb_L)(\bar{\mu}_R\nu_{eL})$	$\mathbf{C}$
CT_bcmunue	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{cb}(ar{c}_R\sigma^{\mu u}b_L)(ar{\mu}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_bcmunumu	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{cb}(ar{c}_L\gamma^\mu b_L)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_bcmunumu	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(\bar{c}_R\gamma^\mu b_R)(\bar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_bcmunumu	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(ar{c}_Lb_R)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CSL_bcmunumu	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(ar{c}_Rb_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_bcmunumu	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(ar{c}_R\sigma^{\mu u}b_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_bcmunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(ar{c}_L\gamma^\mu b_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_bcmunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(ar{c}_R\gamma^\mu b_R)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_bcmunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(ar{c}_Lb_R)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CSL_bcmunutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{cb}(ar{c}_Rb_L)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_bcmunutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cb}(ar{c}_R\sigma^{\mu u}b_L)(ar{\mu}_R\sigma_{\mu u} u_{ au L})$	$\mathbf{C}$

### ubmunu

WC name	Operator	Type
CVL_bumunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^{\mu}b_L)(\bar{\mu}_L\gamma_{\mu}\nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^{\mu}b_R)(\bar{\mu}_L\gamma_{\mu}\nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\mu}_R\nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{\mu}_R\nu_{eL})$	С
CVR_bumunue	$-rac{4ar{G_F}}{\sqrt{2}}V_{ub}(ar{u}_R\gamma^\mu b_R)(ar{\mu}_L\gamma_\mu u_{eL})$	$^{\mathrm{C}}$
CSR_bumunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\mu}_R\nu_{eL})$	$^{\mathrm{C}}$
CSL_bumunue	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{ub}(ar{u}_Rb_L)(ar{\mu}_R u_{eL})$	$^{\mathrm{C}}$

WC name	Operator	Type
CT_bumunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu\nu}b_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{eL})$	C
CVL_bumunumu	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ub}(ar{u}_L\gamma^\mu b_L)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_bumunumu	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^\mu b_R)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	$\mathbf{C}$
CSR_bumunumu	$-rac{4G_F}{\sqrt{2}}V_{ub}(ar{u}_Lb_R)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CSL_bumunumu	$-rac{4\overset{.}{G_F}}{\sqrt{2}}V_{ub}(ar{u}_Rb_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_bumunumu	$-rac{4 \widetilde{G}_F}{\sqrt{2}} V_{ub} (ar{u}_R \sigma^{\mu  u} b_L) (ar{\mu}_R \sigma_{\mu  u}  u_{\mu L})$	$\mathbf{C}$
CVL_bumunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ub}(ar{u}_L\gamma^\mu b_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_bumunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^\mu b_R)(\bar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_bumunutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\mu}_R u_{ au L})$	$^{\mathrm{C}}$
CSL_bumunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_bumunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu u}b_L)(\bar{\mu}_R\sigma_{\mu u} u_{ au L})$	С

#### usmunu

WC name	Operator	Type
CVL_sumunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^{\mu}s_L)(\bar{\mu}_L\gamma_{\mu}\nu_{eL})$	C
CVR_sumunue	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_sumunue	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\mu}_R \nu_{eL})$	$\mathbf{C}$
CSL_sumunue	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{us}(\bar{u}_Rs_L)(\bar{\mu}_R\nu_{eL})$	$\mathbf{C}$
CT_sumunue	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{us}(ar{u}_R\sigma^{\mu u}s_L)(ar{\mu}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_sumunumu	$-rac{4reve{G_F}}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_sumunumu	$-rac{4rac{ec{G}_F}}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_sumunumu	$-rac{4rac{ec{G}_F}}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{\mu}_R  u_{\mu L})$	$\mathbf{C}$
CSL_sumunumu	$-rac{4rac{ec{G}_F}}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_sumunumu	$-rac{4rac{arphi_F}{\sqrt{2}}}{\sqrt{2}}V_{us}(ar{u}_R\sigma^{\mu u}s_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_sumunutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_sumunutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_sumunutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{\mu}_R  u_{ au L})$	$\mathbf{C}$
CSL_sumunutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_sumunutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu}s_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\tau L})$	$\mathbf{C}$

#### csmunu

WC name	Operator	Type
CVL_scmunue	$-rac{4G_F}{\sqrt{2}}V_{cs}(ar{c}_L\gamma^\mu s_L)(ar{\mu}_L\gamma_\mu u_{eL})$	С

WC name	Operator	Type
CVR_scmunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_R\gamma^\mu s_R)(\bar{\mu}_L\gamma_\mu\nu_{eL})$	C
CSR_scmunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{\mu}_R \nu_{eL})$	$\mathbf{C}$
CSL_scmunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_Rs_L)(\bar{\mu}_R\nu_{eL})$	$\mathbf{C}$
CT_scmunue	$-rac{4ar{G}_F}{\sqrt{2}}V_{cs}(ar{c}_R\sigma^{\mu u}s_L)(ar{\mu}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_scmunumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{cs}(ar{c}_L\gamma^\mu s_L)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_scmunumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_scmunumu	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{\mu}_R \nu_{\mu L})$	$\mathbf{C}$
CSL_scmunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{cs}(ar{c}_Rs_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_scmunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{cs}(ar{c}_R\sigma^{\mu u}s_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_scmunutau	$-rac{4ar{G_F}}{\sqrt{2}}V_{cs}(ar{c}_L\gamma^\mu s_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_scmunutau	$-rac{4ar{G_F}}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_scmunutau	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{\mu}_R \nu_{\tau L})$	$\mathbf{C}$
CSL_scmunutau	$-rac{4ar{G}_F}{\sqrt{2}}V_{cs}(ar{c}_Rs_L)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_scmunutau	$-\frac{4\breve{G}_F}{\sqrt{2}}V_{cs}(\bar{c}_R\sigma^{\mu\nu}s_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

#### cdmunu

WC name	Operator	Type
CVL_dcmunue	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_L\gamma^\mu d_L)(\bar{\mu}_L\gamma_\mu\nu_{eL})$	C
CVR_dcmunue	$-\frac{4\widetilde{G}_F^2}{\sqrt{2}}V_{cd}(\bar{c}_R\gamma^\mu d_R)(\bar{\mu}_L\gamma_\mu\nu_{eL})$	$\mathbf{C}$
CSR_dcmunue	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cd}(ar{c}_Ld_R)(ar{\mu}_R u_{eL})$	$\mathbf{C}$
CSL_dcmunue	$-rac{4reve{G_F}}{\sqrt{2}}V_{cd}(ar{c}_Rd_L)(ar{\mu}_R u_{eL})$	$\mathbf{C}$
CT_dcmunue	$-rac{4reve{G_F}}{\sqrt{2}}V_{cd}(ar{c}_R\sigma^{\mu u}d_L)(ar{\mu}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_dcmunumu	$-rac{4reve{G_F}}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_dcmunumu	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R\gamma^\mu d_R)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	$\mathbf{C}$
CSR_dcmunumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{cd}(ar{c}_Ld_R)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CSL_dcmunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{cd}(ar{c}_Rd_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_dcmunumu	$-rac{4ar{G}_F}{\sqrt{2}}V_{cd}(ar{c}_R\sigma^{\mu u}d_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_dcmunutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_dcmunutau	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cd}(\bar{c}_R\gamma^\mu d_R)(\bar{\mu}_L\gamma_\mu\nu_{\tau L})$	$\mathbf{C}$
CSR_dcmunutau	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{cd}(\bar{c}_Ld_R)(\bar{\mu}_R\nu_{\tau L})$	$\mathbf{C}$
CSL_dcmunutau	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{cd}(ar{c}_Rd_L)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_dcmunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cd}(ar{c}_R\sigma^{\mu u}d_L)(ar{\mu}_R\sigma_{\mu u} u_{ au L})$	$\mathbf{C}$

## ${\tt cbtaunu}$

WC name	Operator	Type
CVL_bctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L\gamma^{\mu}b_L)(\bar{\tau}_L\gamma_{\mu}\nu_{eL})$	С
CVR_bctaunue	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cb}(\bar{c}_R\gamma^\mu b_R)(\bar{ au}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_bctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L b_R)(\bar{\tau}_R \nu_{eL})$	$\mathbf{C}$
CSL_bctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_Rb_L)(\bar{\tau}_R\nu_{eL})$	$\mathbf{C}$
CT_bctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_R\sigma^{\mu\nu}b_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{eL})$	$\mathbf{C}$
CVL_bctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cb}(ar{c}_L\gamma^\mu b_L)(ar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_bctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cb}(ar{c}_R\gamma^\mu b_R)(ar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_bctaunumu	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L b_R)(\bar{\tau}_R \nu_{\mu L})$	$\mathbf{C}$
CSL_bctaunumu	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_Rb_L)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CT_bctaunumu	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_R\sigma^{\mu\nu}b_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_bctaunutau	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L\gamma^\mu b_L)(\bar{\tau}_L\gamma_\mu  u_{\tau L})$	$\mathbf{C}$
CVR_bctaunutau	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_R\gamma^{\mu}b_R)(\bar{\tau}_L\gamma_{\mu} u_{\tau L})$	$\mathbf{C}$
CSR_bctaunutau	$-\frac{4G_F}{\sqrt{2}}V_{cb}(\bar{c}_L b_R)(\bar{\tau}_R \nu_{\tau L})$	$\mathbf{C}$
CSL_bctaunutau	$-rac{4\overset{\circ}{G_{E}}}{\sqrt{2}}V_{cb}(\bar{c}_{R}b_{L})(\bar{ au}_{R} u_{ au L})$	$\mathbf{C}$
CT_bctaunutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{cb}(\bar{c}_R\sigma^{\mu\nu}b_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

## ${\tt ubtaunu}$

WC name	Operator	Type
CVL_butaunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^{\mu}b_L)(\bar{\tau}_L\gamma_{\mu} u_{eL})$	C
CVR_butaunue	$-rac{4\overset{Y}{G_{F}}}{\sqrt{2}}V_{ub}(\bar{u}_{R}\gamma^{\mu}b_{R})(\bar{ au}_{L}\gamma_{\mu} u_{eL})$	$\mathbf{C}$
CSR_butaunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\tau}_R\nu_{eL})$	$^{\mathrm{C}}$
CSL_butaunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{\tau}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_butaunue	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu\nu}b_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{eL})$	$^{\mathrm{C}}$
CVL_butaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^{\mu}b_L)(\bar{\tau}_L\gamma_{\mu}\nu_{\mu L})$	$\mathbf{C}$
CVR_butaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^{\mu}b_R)(\bar{\tau}_L\gamma_{\mu}\nu_{\mu L})$	$\mathbf{C}$
CSR_butaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CSL_butaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CT_butaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu\nu}b_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_butaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^{\mu}b_L)(\bar{\tau}_L\gamma_{\mu}\nu_{\tau L})$	$\mathbf{C}$
CVR_butaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^{\mu}b_R)(\bar{\tau}_L\gamma_{\mu}\nu_{\tau L})$	$\mathbf{C}$
CSR_butaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\tau}_R\nu_{\tau L})$	$\mathbf{C}$
CSL_butaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{\tau}_R\nu_{\tau L})$	$^{\mathrm{C}}$
CT_butaunutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ub}(\bar{u}_R\sigma^{\mu\nu}b_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

#### ustaunu

WC name	Operator	Type
CVL_sutaunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^{\mu}s_L)(\bar{\tau}_L\gamma_{\mu}\nu_{eL})$	C
CVR_sutaunue	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{ au}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_sutaunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\tau}_R \nu_{eL})$	$\mathbf{C}$
CSL_sutaunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_Rs_L)(\bar{\tau}_R\nu_{eL})$	$\mathbf{C}$
CT_sutaunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu}s_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{eL})$	$\mathbf{C}$
CVL_sutaunumu	$-rac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_sutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^{\mu}s_R)(\bar{\tau}_L\gamma_{\mu}\nu_{\mu L})$	$\mathbf{C}$
CSR_sutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\tau}_R \nu_{\mu L})$	$\mathbf{C}$
CSL_sutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_Rs_L)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CT_sutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu}s_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_sutaunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{ au}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_sutaunutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{ au}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_sutaunutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{ au}_R  u_{ au L})$	$\mathbf{C}$
CSL_sutaunutau	$-rac{4 iny G_F^2}{\sqrt{2}}V_{us}(ar{u}_R s_L)(ar{ au}_R  u_{ au L})$	$\mathbf{C}$
CT_sutaunutau	$-rac{4\widetilde{Q}_F^2}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu u}s_L)(\bar{ au}_R\sigma_{\mu u} u_{ au L})$	C

## ${\tt cstaunu}$

WC name	Operator	Type
CVL_sctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_L\gamma^{\mu}s_L)(\bar{\tau}_L\gamma_{\mu}\nu_{eL})$	
CVR_sctaunue	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{ au}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_sctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{\tau}_R \nu_{eL})$	$\mathbf{C}$
CSL_sctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_Rs_L)(\bar{\tau}_R\nu_{eL})$	$\mathbf{C}$
CT_sctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_R\sigma^{\mu\nu}s_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{eL})$	$\mathbf{C}$
CVL_sctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cs}(ar{c}_L\gamma^\mu s_L)(ar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_sctaunumu	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_sctaunumu	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{ au}_R  u_{\mu L})$	$\mathbf{C}$
CSL_sctaunumu	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_Rs_L)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CT_sctaunumu	$-\frac{4G_F}{\sqrt{2}}V_{cs}(\bar{c}_R\sigma^{\mu\nu}s_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
CVL_sctaunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cs}(\bar{c}_L\gamma^\mu s_L)(\bar{ au}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_sctaunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cs}(ar{c}_R\gamma^\mu s_R)(ar{ au}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_sctaunutau	$-rac{4\ddot{G}_F}{\sqrt{2}}V_{cs}(\bar{c}_L s_R)(\bar{ au}_R  u_{ au L})$	$\mathbf{C}$
CSL_sctaunutau	$-rac{4\ddot{G}_F}{\sqrt{2}}V_{cs}(\bar{c}_Rs_L)(\bar{ au}_R u_{ au L})$	$\mathbf{C}$
CT_sctaunutau	$-\frac{4\tilde{G}_F^2}{\sqrt{2}}V_{cs}(\bar{c}_R\sigma^{\mu\nu}s_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

## cdtaunu

WC name	Operator	Type
CVL_dctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_L\gamma^\mu d_L)(\bar{\tau}_L\gamma_\mu\nu_{eL})$	C
CVR_dctaunue	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{cd}(ar{c}_R\gamma^\mu d_R)(ar{ au}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_dctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_Ld_R)(\bar{\tau}_R\nu_{eL})$	$^{\mathrm{C}}$
CSL_dctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_Rd_L)(\bar{\tau}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_dctaunue	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R\sigma^{\mu\nu}d_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{eL})$	$^{\mathrm{C}}$
CVL_dctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_dctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_R\gamma^\mu d_R)(ar{ au}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_dctaunumu	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_Ld_R)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CSL_dctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_Rd_L)(ar{ au}_R u_{\mu L})$	$\mathbf{C}$
CT_dctaunumu	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_R\sigma^{\mu u}d_L)(ar{ au}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_dctaunutau	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_L\gamma^\mu d_L)(ar{ au}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_dctaunutau	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_R\gamma^\mu d_R)(\bar{\tau}_L\gamma_\mu\nu_{\tau L})$	$^{\mathrm{C}}$
CSR_dctaunutau	$-\frac{4G_F}{\sqrt{2}}V_{cd}(\bar{c}_Ld_R)(\bar{\tau}_R\nu_{\tau L})$	$^{\mathrm{C}}$
CSL_dctaunutau	$-rac{4G_F}{\sqrt{2}}V_{cd}(ar{c}_Rd_L)(ar{ au}_R u_{ au L})$	$^{\mathrm{C}}$
CT_dctaunutau	$-rac{4ar{G_F}}{\sqrt{2}}V_{cd}(ar{c}_R\sigma^{\mu u}d_L)(ar{ au}_R\sigma_{\mu u} u_{ au L})$	C

## udenu

WC name	Operator	Type
CVL_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
CVR_duenue	$-rac{4\check{G}_F^c}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{e}_L\gamma_\mu u_{eL})$	$^{\mathrm{C}}$
CSR_duenue	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CSL_duenue	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_duenue	$-rac{4ar{Q}_F}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{e}_R\sigma_{\mu u} u_{eL})$	$^{\mathrm{C}}$
CVL_duenumu	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{\mu L})$	$^{\mathrm{C}}$
CVR_duenumu	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{e}_L\gamma_\mu u_{\mu L})$	$^{\mathrm{C}}$
CSR_duenumu	$-\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ud}(\bar{u}_{L}d_{R})(\bar{e}_{R}\nu_{\mu L})$	$^{\mathrm{C}}$
CSL_duenumu	$-\frac{4\check{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R\nu_{\mu L})$	$^{\mathrm{C}}$
CT_duenumu	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{e}_R\sigma_{\mu u} u_{\mu L})$	$^{\mathrm{C}}$
CVL_duenutau	$-rac{4reve{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{ au L})$	$^{\mathrm{C}}$
CVR_duenutau	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{e}_L\gamma_\mu u_{ au L})$	$^{\mathrm{C}}$
CSR_duenutau	$-\frac{4 \tilde{Q}_{F}^{C}}{\sqrt{2}} V_{ud}(\bar{u}_{L} d_{R})(\bar{e}_{R} \nu_{\tau L})$	$^{\mathrm{C}}$
CSL_duenutau	$-\frac{4\overset{\sim}{Q_F}}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R u_{\tau L})$	$\mathbf{C}$
CT_duenutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{e}_R\sigma_{\mu u} u_{ au L})$	С

## udmunu

WC name	Operator	Type
CVL_dumunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\mu}_L\gamma_\mu\nu_{eL})$	
CVR_dumunue	$-rac{4G_F^2}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{\mu}_L\gamma_\mu u_{eL})$	$^{\mathrm{C}}$
CSR_dumunue	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{ud}(ar{u}_Ld_R)(ar{\mu}_R u_{eL})$	$\mathbf{C}$
CSL_dumunue	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{ud}(ar{u}_Rd_L)(ar{\mu}_R u_{eL})$	$\mathbf{C}$
CT_dumunue	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{\mu}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_dumunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_dumunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_dumunumu	$-\frac{4\widetilde{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\mu}_R\nu_{\mu L})$	$\mathbf{C}$
CSL_dumunumu	$-rac{4\widetilde{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_dumunumu	$-rac{4G_F}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_dumunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_dumunutau	$-rac{4\widetilde{G}_F}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{\mu}_L\gamma_\mu u_{ au L})$	$^{\mathrm{C}}$
CSR_dumunutau	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\mu}_R u_{\tau L})$	$^{\mathrm{C}}$
CSL_dumunutau	$-rac{4\widetilde{G}_F^2}{\sqrt{2}}V_{ud}(ar{u}_Rd_L)(ar{\mu}_R u_{ au L})$	$^{\mathrm{C}}$
CT_dumunutau	$-\frac{4\overset{Q^{\prime}}{\mathcal{L}_{F}}}{\sqrt{2}}V_{ud}(\bar{u}_{R}\sigma^{\mu\nu}d_{L})(\bar{\mu}_{R}\sigma_{\mu\nu}\nu_{\tau L})$	C

## ${\tt udtaunu}$

WC name	Operator	Type
CVL_dutaunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\tau}_L\gamma_\mu\nu_{eL})$	C
CVR_dutaunue	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{\tau}_L\gamma_\mu\nu_{eL})$	$\mathbf{C}$
CSR_dutaunue	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\tau}_R\nu_{eL})$	$\mathbf{C}$
CSL_dutaunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{\tau}_R\nu_{eL})$	$\mathbf{C}$
CT_dutaunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{eL})$	$\mathbf{C}$
$CVL\_dutaunumu$	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\tau}_L\gamma_\mu\nu_{\mu L})$	$\mathbf{C}$
CVR_dutaunumu	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{\tau}_L\gamma_\mu\nu_{\mu L})$	$\mathbf{C}$
CSR_dutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CSL_dutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{\tau}_R\nu_{\mu L})$	$\mathbf{C}$
CT_dutaunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\mu L})$	$\mathbf{C}$
${\tt CVL\_dutaunutau}$	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\tau}_L\gamma_\mu\nu_{\tau L})$	$\mathbf{C}$
CVR_dutaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{\tau}_L\gamma_\mu\nu_{\tau L})$	$\mathbf{C}$
CSR_dutaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\tau}_R\nu_{\tau L})$	$\mathbf{C}$
CSL_dutaunutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{\tau}_R\nu_{\tau L})$	$\mathbf{C}$
CT_dutaunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{\tau}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

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WC name	Operator	Type
CG	$\frac{4G_F}{\sqrt{2}}f^{ABC}G^{A u}_{\mu}G^{B ho}_{ u}G^{C\mu}_{ ho}$	R
CGtilde	$rac{4\widetilde{G}_F}{\sqrt{2}}f^{ABC}\widetilde{G}_{\mu}^{A u}G_{ u}^{B ho}G_{ ho}^{C\mu}$	${ m R}$
C7_uu	$\frac{4G_F}{\sqrt{2}} f^{ABC} \widetilde{G}_{\mu}^{A\nu} G_{\nu}^{B\rho} G_{\rho}^{C\mu}$ $\frac{4G_F}{\sqrt{2}} \frac{e}{16\pi^2} m_u \bar{u}_L \sigma^{\mu\nu} u_R F_{\mu\nu}$	$\mathbf{C}$
C7_cc	$rac{4Q_F^2}{\sqrt{2}}rac{e}{16\pi^2}m_car{c}_L\sigma^{\mu u}c_RF_{\mu u}$	$\mathbf{C}$
C7_dd	$\frac{4\tilde{G}_F}{\sqrt{2}} \frac{e}{16\pi^2} m_d \bar{d}_L \sigma^{\mu\nu} d_R F_{\mu\nu}$	$\mathbf{C}$
C7_ss	$rac{4G_F}{\sqrt{2}}rac{e}{16\pi^2}m_sar{s}_L\sigma^{\mu u}s_RF_{\mu u}$	$^{\mathrm{C}}$
C7_bb	$rac{4Q_F}{\sqrt{2}}rac{e}{16\pi^2}m_bar{b}_L\sigma^{\mu u}b_RF_{\mu u}$	$\mathbf{C}$
C7_ee	$rac{4G_F^2}{\sqrt{2}}rac{e}{16\pi^2}m_ear{e}_L\sigma^{\mu u}e_RF_{\mu u}$	$\mathbf{C}$
C7_mumu	$\frac{4G_F^2}{\sqrt{2}} \frac{e}{16\pi^2} m_\mu \bar{\mu}_L \sigma^{\mu\nu} \mu_R F_{\mu\nu}$	$\mathbf{C}$
C7_tautau	$\frac{4G_F}{\sqrt{2}}\frac{e}{16\pi^2}m_{ au}ar{ au}_L\sigma^{\mu u} au_RF_{\mu u}$	$\mathbf{C}$
C8_uu	$\frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_u \bar{u}_L \sigma^{\mu\nu} T^A u_R G_{\mu\nu}^A$	$\mathbf{C}$
C8_cc	$ \frac{4G_F^2}{\sqrt{2}} \frac{g_s}{16\pi^2} m_c \bar{c}_L \sigma^{\mu\nu} T^A c_R G_{\mu\nu}^A \\ \frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_d \bar{d}_L \sigma^{\mu\nu} T^A d_R G_{\mu\nu}^A \\ \frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_s \bar{s}_L \sigma^{\mu\nu} T^A s_R G_{\mu\nu}^A $	$\mathbf{C}$
C8_dd	$\frac{4G_F}{4G_F} \frac{g_s}{16\pi^2} m_d \bar{d}_L \sigma^{\mu\nu} T^A d_R G_{\mu\nu}^A$	$\mathbf{C}$
C8_ss	$\frac{4G_F^2}{4G_F} \frac{g_s}{16\pi^2} m_s \bar{s}_L \sigma^{\mu\nu} T^A s_R G_{\mu\nu}^A$	$\mathbf{C}$
C8_bb	$rac{4G_F}{\sqrt{2}}rac{g_s}{16\pi^2}m_bar{b}_L\sigma^{\mu u}T^Ab_RG^A_{\mu u}$	$^{\mathrm{C}}$
CTRR_eeuu	$rac{4G_F}{4G_F}(ar{e}_L\sigma^{\mu u}e_R)(ar{u}_L\sigma_{\mu u}u_R)$	$^{\mathrm{C}}$
CTRR_eecc	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{u}_L\sigma_{\mu\nu}u_R)$ $\frac{4G_F}{\sqrt{2}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{c}_L\sigma_{\mu\nu}c_R)$	$^{\mathrm{C}}$
CTRR_mumuuu	$rac{4Q_F^2}{Q_Z^2}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{u}_L\sigma_{\mu u}u_R)$	$^{\mathrm{C}}$
CTRR_mumucc	$rac{4 \stackrel{\checkmark}{\mathcal{G}_F}}{\sqrt{2}} (ar{\mu}_L \sigma^{\mu  u} \mu_R) (ar{c}_L \sigma_{\mu  u} c_R)$	$^{\mathrm{C}}$
CTRR_tautauuu	$rac{4 \overset{Q^2}{G_F}}{\sqrt{2}} (ar{ au}_L \sigma^{\mu u}  au_R) (ar{u}_L \sigma_{\mu u} u_R)$	$\mathbf{C}$
CTRR_tautaucc	$rac{4G_F^2}{\sqrt{2}}(ar{ au}_L\sigma^{\mu u} au_R)(ar{c}_L\sigma_{\mu u}c_R)$	$^{\mathrm{C}}$
CTRR_eedd	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{\tau}_L\sigma^{\mu\nu}\tau_R)(\bar{c}_L\sigma_{\mu\nu}c_R)$ $\frac{4G_F}{\sqrt{2}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{d}_L\sigma_{\mu\nu}d_R)$	$\mathbf{C}$
CTRR_eess	$\frac{4\overset{Q}{G_F}}{\sqrt{2}}(ar{e}_L\sigma^{\mu u}e_R)(ar{s}_L\sigma_{\mu u}s_R)$	$\mathbf{C}$
CTRR_eebb	$rac{4 oxed{Q}_F^2}{\sqrt{2}} (ar{e}_L \sigma^{\mu  u} e_R) (ar{b}_L \sigma_{\mu  u} b_R)$	$\mathbf{C}$
CTRR_mumudd	$rac{4rac{rack{V}_F^2}{\sqrt{2}}}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{d}_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
CTRR_mumuss	$rac{4rac{rack{V}_F^2}{\sqrt{2}}}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{s}_L\sigma_{\mu u}s_R)$	$\mathbf{C}$
CTRR_mumubb	$rac{4reve{\zeta}_F^c}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{b}_L\sigma_{\mu u}b_R)$	$^{\mathrm{C}}$
CTRR_tautaudd	$rac{4G_F^2}{\sqrt{2}}(ar{ au}_L\sigma^{\mu u} au_R)(ar{d}_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
CTRR_tautauss	$rac{4G_F^2}{\sqrt{2}}(ar{ au}_L\sigma^{\mu u} au_R)(ar{s}_L\sigma_{\mu u}s_R)$	$^{\mathrm{C}}$
CTRR_tautaubb	$rac{4G_F^c}{\sqrt{2}}(ar{ au}_L\sigma^{\mu u} au_R)(ar{s}_L\sigma_{\mu u}s_R) \ rac{4G_F}{\sqrt{2}}(ar{ au}_L\sigma^{\mu u} au_R)(ar{b}_L\sigma_{\mu u}b_R)$	$^{\mathrm{C}}$
CS1RR_uuuu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{u}_L u_R)(\bar{u}_L u_R)$	$\mathbf{C}$
CS1RR_uucc	$\frac{4G_F}{G_F}(\bar{u}_L u_R)(\bar{c}_L c_R)$	$\mathbf{C}$
CS1RR_uccu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L c_R)(\bar{c}_L u_R)$	$\mathbf{C}$
CS1RR_cccc	$ \frac{4G_F}{\sqrt{2}}(\bar{u}_L u_R)(\bar{u}_L u_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}_L u_R)(\bar{c}_L c_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}_L c_R)(\bar{c}_L c_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{c}_L c_R)(\bar{c}_L u_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{c}_L c_R)(\bar{c}_L c_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{u}_L T^A u_R) $	$\mathbf{C}$
CS8RR_uuuu	$4G_F \left( \overline{a}, TA_{\alpha \beta} \right) \left( \overline{a}, TA_{\alpha \beta} \right)$	$^{\mathrm{C}}$

WC name	Operator	Type
CS8RR_uucc	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{c}_L T^A c_R)$	C
CS8RR_uccu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A c_R)(\bar{c}_L T^A u_R)$	$\mathbf{C}$
CS8RR_cccc	$\frac{4\overleftarrow{G_F}}{\sqrt{2}}(\bar{c}_LT^Ac_R)(\bar{c}_LT^Ac_R)$	$\mathbf{C}$
CS1RR_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L u_R)(\bar{d}_L d_R)$	$^{\mathrm{C}}$
CS1RR_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L u_R)(\bar{s}_L s_R)$	$\mathbf{C}$
CS1RR_uubb	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L u_R)(\bar{b}_L b_R)$	$\mathbf{C}$
CS1RR_ccdd	$rac{4G_F}{\sqrt{2}}(ar{c}_L c_R)(ar{d}_L d_R)$	$\mathbf{C}$
CS1RR_ccss	$rac{4G_F}{\sqrt{2}}(ar{c}_L c_R)(ar{s}_L s_R)$	$^{\mathrm{C}}$
CS1RR_ccbb	$rac{4G_F}{\sqrt{2}}(ar{c}_L c_R)(ar{b}_L b_R)$	$\mathbf{C}$
CS8RR_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{d}_L T^A d_R)$	$\mathbf{C}$
CS8RR_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{s}_L T^A s_R)$	$\mathbf{C}$
CS8RR_uubb	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{b}_L T^A b_R)$	$\mathbf{C}$
CS8RR_ccdd	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L T^A c_R)(\bar{d}_L T^A d_R)$	$\mathbf{C}$
CS8RR_ccss	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L T^A c_R)(\bar{s}_L T^A s_R)$	$^{\mathrm{C}}$
CS8RR_ccbb	$rac{4G_F}{\sqrt{2}}(ar{c}_L T^A c_R)(ar{b}_L T^A b_R)$	$\mathbf{C}$
CS1RR_dddd	$rac{4G_F}{\sqrt{2}}(ar{d}_L d_R)(ar{d}_L d_R)$	$\mathbf{C}$
CS1RR_ddss	$rac{4G_F}{\sqrt{2}}(ar{d}_L d_R)(ar{s}_L s_R)$	$^{\mathrm{C}}$
CS1RR_ddbb	$rac{4G_F}{\sqrt{2}}(ar{d}_L d_R)(ar{b}_L b_R)$	$\mathbf{C}$
CS1RR_dssd	$rac{4G_F}{\sqrt{2}}(ar{d}_L s_R)(ar{s}_L d_R)$	$\mathbf{C}$
CS1RR_dbbd	$rac{4G_F}{\sqrt{2}}(ar{d}_L b_R)(ar{b}_L d_R)$	$\mathbf{C}$
CS1RR_ssss	$rac{4G_F}{\sqrt{2}}(ar{s}_L s_R)(ar{s}_L s_R)$	$\mathbf{C}$
CS1RR_ssbb	$rac{4G_F}{\sqrt{2}}(ar{s}_L s_R)(ar{b}_L b_R)$	$^{\mathrm{C}}$
CS1RR_sbbs	$rac{4G_F}{\sqrt{2}}(ar{s}_L b_R)(ar{b}_L s_R)$	$\mathbf{C}$
CS1RR_bbbb	$rac{4G_F}{\sqrt{2}}(ar{b}_L b_R)(ar{b}_L b_R)$	$\mathbf{C}$
CS8RR_dddd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L T^A d_R)(\bar{d}_L T^A d_R)$	$\mathbf{C}$
CS8RR_ddss	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L T^A d_R)(\bar{s}_L T^A s_R)$	$^{\mathrm{C}}$
CS8RR_ddbb	$rac{4G_F}{\sqrt{2}}(ar{d}_L T^A d_R)(ar{b}_L T^A b_R)$	$\mathbf{C}$
CS8RR_dssd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{d}_L T^A s_R)(ar{s}_L T^A d_R)$	$^{\mathrm{C}}$
CS8RR_dbbd	$rac{4G_F}{\sqrt{2}}(ar{d}_L T^A b_R)(ar{b}_L T^A d_R)$	$^{\mathrm{C}}$
CS8RR_ssss	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L T^A s_R)(\bar{s}_L T^A s_R)$	$^{\mathrm{C}}$
CS8RR_ssbb	$rac{4ar{G}_F^2}{\sqrt{2}}(ar{s}_L T^A s_R)(ar{b}_L T^A b_R)$	$\mathbf{C}$
CS8RR_sbbs	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L T^A b_R)(\bar{b}_L T^A s_R)$	$^{\mathrm{C}}$
CS8RR_bbbb	$rac{4G_F}{\sqrt{2}}(ar{b}_LT^Ab_R)(ar{b}_LT^Ab_R)$	$\mathbf{C}$
CS1RR_uddu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L d_R)(\bar{d}_L u_R)$	$\mathbf{C}$
CS1RR_ussu	$rac{4ar{G_F}}{\sqrt{2}}(ar{u}_L s_R)(ar{s}_L u_R)$	$\mathbf{C}$
CS1RR_ubbu	$rac{4rac{Q_F^2}{\sqrt{2}}}{\sqrt{2}}(ar{u}_L s_R)(ar{s}_L u_R) \ rac{4G_F}{\sqrt{2}}(ar{u}_L b_R)(ar{b}_L u_R) \ rac{4G_F}{\sqrt{2}}(ar{c}_L d_R)(ar{d}_L c_R)$	$\mathbf{C}$
CS1RR_cddc	$\frac{4G_F^-}{G_C^-}(\bar{c}_L d_R)(\bar{d}_L c_R)$	$\mathbf{C}$

WC name	Operator	Type
CS1RR_cssc	$\frac{4G_F}{\sqrt{2}}(ar{c}_L s_R)(ar{s}_L c_R)$	C
CS1RR_cbbc	$rac{4G_F}{\sqrt{2}}(ar{c}_L b_R)(ar{b}_L c_R)$	$\mathbf{C}$
CS8RR_uddu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}_LT^Ad_R)(\bar{d}_LT^Au_R)$	$^{\mathrm{C}}$
CS8RR_ussu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A s_R)(\bar{s}_L T^A u_R)$	$^{\mathrm{C}}$
CS8RR_ubbu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A b_R)(\bar{b}_L T^A u_R)$	$^{\mathrm{C}}$
CS8RR_cddc	$\frac{4 \bar{G}_F}{\sqrt{2}} (\bar{c}_L T^A d_R) (\bar{d}_L T^A c_R)$	$^{\mathrm{C}}$
CS8RR_cssc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L T^A s_R)(\bar{s}_L T^A c_R)$	$\mathbf{C}$
CS8RR_cbbc	$rac{4G_F}{\sqrt{2}}(ar{c}_L T^A b_R)(ar{b}_L T^A c_R)$	$^{\mathrm{C}}$
CSRL_eebb	$rac{4ar{G_F}}{\sqrt{2}}(ar{e}_L e_R)(ar{b}_R b_L)$	$^{\mathrm{C}}$
CSRL_eecc	$rac{4ar{G_F}}{\sqrt{2}}(ar{e}_L e_R)(ar{c}_R c_L)$	$^{\mathrm{C}}$
CSRL_eedd	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{d}_R d_L)$	$\mathbf{C}$
CSRL_eess	$\frac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{s}_R s_L)$	$\mathbf{C}$
CSRL_eeuu	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{u}_R u_L)$	$\mathbf{C}$
CSRL_mumubb	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{b}_Rb_L)$	$^{\mathrm{C}}$
CSRL_mumucc	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{c}_Rc_L)$	$^{\mathrm{C}}$
CSRL_mumudd	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{d}_Rd_L)$	$^{\mathrm{C}}$
CSRL_mumuss	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{s}_Rs_L)$	$\mathbf{C}$
CSRL_mumuuu	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{u}_Ru_L)$	$^{\mathrm{C}}$
CSRL_tautaubb	$rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{b}_Rb_L)$	$\mathbf{C}$
CSRL_tautaucc	$rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{c}_Rc_L)$	$^{\mathrm{C}}$
CSRL_tautaudd	$rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{d}_Rd_L)$	$^{\mathrm{C}}$
CSRL_tautauss	$rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{s}_Rs_L)$	$^{\mathrm{C}}$
CSRL_tautauuu	$rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{u}_Ru_L)$	$^{\mathrm{C}}$
CSRR_eebb	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{b}_L b_R)$	$^{\mathrm{C}}$
CSRR_eecc	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{c}_L c_R)$	$\mathbf{C}$
CSRR_eedd	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{d}_L d_R)$	$\mathbf{C}$
CSRR_eeee	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{e}_L e_R)$	$^{\mathrm{C}}$
CSRR_eemumu	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{\mu}_L \mu_R)$	$\mathbf{C}$
CSRR_eess	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{s}_L s_R)$	$^{\mathrm{C}}$
CSRR_eetautau	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{ au}_L  au_R)$	$^{\mathrm{C}}$
CSRR_eeuu	$\frac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{u}_L u_R)$	$^{\mathrm{C}}$
CSRR_emumue	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_Le_R)$ $\frac{4G_F}{\sqrt{2}}(\bar{e}_L\tau_R)(\bar{\tau}_Le_R)$ $\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{b}_Lb_R)$	$^{\mathrm{C}}$
CSRR_etautaue	$rac{4G_F}{\sqrt{2}}(ar{e}_L au_R)(ar{ au}_Le_R)$	$^{\mathrm{C}}$
CSRR_mumubb	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(b_Lb_R)$	$^{\mathrm{C}}$
CSRR_mumucc	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{c}_Lc_R)$	$^{\mathrm{C}}$
CSRR_mumudd	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{d}_Ld_R)$	$^{\mathrm{C}}$
CSRR_mumumumu	$ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L \mu_R)(\bar{c}_L c_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L \mu_R)(\bar{d}_L d_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L \mu_R)(\bar{\mu}_L \mu_R) $	$^{\mathrm{C}}$

WC name	Operator	Type
CSRR_mumuss	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{s}_Ls_R)$	С
CSRR_mumutautau	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{\tau}_L au_R)$	$\mathbf{C}$
CSRR_mumuuu	$\frac{4\widetilde{G}_F^c}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R)$	$^{\mathrm{C}}$
CSRR_mutautaumu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L  au_R)(\bar{ au}_L \mu_R)$	$^{\mathrm{C}}$
CSRR_tautaubb	$\frac{4G_F}{\sqrt{2}}(\bar{ au}_L au_R)(\bar{b}_Lb_R)$	$\mathbf{C}$
CSRR_tautaucc	$\frac{4G_F}{\sqrt{2}}(\bar{ au}_L au_R)(\bar{c}_Lc_R)$	$\mathbf{C}$
CSRR_tautaudd	$rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{d}_Ld_R)$	$\mathbf{C}$
CSRR_tautauss	$\frac{4G_F}{\sqrt{2}}(\bar{ au}_L au_R)(\bar{s}_Ls_R)$	$^{\mathrm{C}}$
CSRR_tautautautau	$-rac{4G_F}{\sqrt{2}}(ar{ au}_L au_R)(ar{ au}_L au_R)$	$^{\mathrm{C}}$
CSRR_tautauuu	$\frac{4G_F}{\sqrt{2}}(\bar{\tau}_L\tau_R)(\bar{u}_Lu_R)$	$^{\mathrm{C}}$
CV1LL_ccbb	$rac{4G_F}{\sqrt{2}}(ar{c}_L\gamma^\mu c_L)(ar{b}_L\gamma_\mu b_L)$	R
CV1LL_ccdd	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu c_L)(\bar{d}_L\gamma_\mu d_L)$	R
CV1LL_ccss	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu c_L)(\bar{s}_L\gamma_\mu s_L)$	R
CV1LL_uubb	$rac{4ar{G}_F}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{b}_L\gamma_\mu b_L)$	R
CV1LL_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L)$	R
CV1LL_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L)$	R
CV1LR_bbbb	$\frac{4G_F}{\sqrt{2}}(\bar{b}_L\gamma^\mu b_L)(\bar{b}_R\gamma_\mu b_R)$	R
CV1LR_bbcc	$rac{4G_F}{\sqrt{2}}(ar{b}_L\gamma^\mu b_L)(ar{c}_R\gamma_\mu c_R)$	${ m R}$
CV1LR_bbdd	$rac{4G_F}{\sqrt{2}}(ar{b}_L\gamma^\mu b_L)(ar{d}_R\gamma_\mu d_R)$	R
CV1LR_bbss	$rac{4G_F}{\sqrt{2}}(ar{b}_L\gamma^\mu b_L)(ar{s}_R\gamma_\mu s_R)$	R
CV1LR_bbuu	$\frac{4G_F}{\sqrt{2}}(\bar{b}_L\gamma^\mu b_L)(\bar{u}_R\gamma_\mu u_R)$	R
CV1LR_cbbc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu b_L)(\bar{b}_R\gamma_\mu c_R)$	$\mathbf{C}$
CV1LR_ccbb	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu c_L)(\bar{b}_R\gamma_\mu b_R)$	R
CV1LR_cccc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu c_L)(\bar{c}_R\gamma_\mu c_R)$	R
CV1LR_ccdd	$rac{4G_F}{\sqrt{2}}(ar{c}_L\gamma^\mu c_L)(ar{d}_R\gamma_\mu d_R)$	R
CV1LR_ccss	$rac{4G_F}{\sqrt{2}}(ar{c}_L\gamma^\mu c_L)(ar{s}_R\gamma_\mu s_R)$	R
CV1LR_ccuu	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu c_L)(\bar{u}_R\gamma_\mu u_R)$	R
CV1LR_cddc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu c_R)$	$\mathbf{C}$
CV1LR_cssc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu c_R)$	$\mathbf{C}$
CV1LR_dbbd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu b_L)(\bar{b}_R\gamma_\mu d_R)$	$\mathbf{C}$
CV1LR_ddbb	$rac{4ar{G}_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{b}_R\gamma_\mu b_R)$	R
CV1LR_ddcc	$rac{4\dot{G}_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{c}_R\gamma_\mu c_R)$	R
CV1LR_dddd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{d}_R\gamma_\mu d_R)$	R
CV1LR_ddss	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{s}_R\gamma_\mu s_R)$	R
CV1LR_dduu	$\frac{\frac{\sqrt{2}}{\sqrt{2}}(a_L\gamma^{\mu}b_L)(b_R\gamma_{\mu}a_R)}{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{b}_R\gamma_{\mu}b_R)}$ $\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{c}_R\gamma_{\mu}c_R)}{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}d_R)}$ $\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{s}_R\gamma_{\mu}s_R)}{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{u}_R\gamma_{\mu}u_R)}$ $\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}d_R)$ $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}b_L)(\bar{b}_R\gamma_{\mu}s_R)$	R
CV1LR_dssd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu s_L)(ar{s}_R\gamma_\mu d_R)$	$\mathbf{C}$
CV1LR_sbbs	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu b_L)(\bar{b}_R\gamma_\mu s_R)$	$\mathbf{C}$
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WC name	Operator	Type
CV1LR_ssbb	$rac{4G_F}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{b}_R\gamma_\mu b_R)$	$\mathbf{R}$
CV1LR_sscc	$rac{4ar{G}_F^c}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{c}_R\gamma_\mu c_R)$	R
CV1LR_ssdd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{d}_R\gamma_\mu d_R)$	${ m R}$
CV1LR_ssss	$rac{4\widetilde{G_F}}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{s}_R\gamma_\mu s_R)$	${ m R}$
CV1LR_ssuu	$rac{4ar{G}_F^F}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{u}_R\gamma_\mu u_R)$	${ m R}$
CV1LR_ubbu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{u}_L\gamma^\mu b_L)(ar{b}_R\gamma_\mu u_R)$	$\mathbf{C}$
CV1LR_uccu	$rac{4 ar{G}_F^F}{\sqrt{2}} (ar{u}_L \gamma^\mu c_L) (ar{c}_R \gamma_\mu u_R)$	$\mathbf{C}$
CV1LR_uddu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{u}_L\gamma^\mu d_L)(ar{d}_R\gamma_\mu u_R)$	$\mathbf{C}$
CV1LR_ussu	$rac{4ar{G}_F^F}{\sqrt{2}}(ar{u}_L\gamma^\mu s_L)(ar{s}_R\gamma_\mu u_R)$	$\mathbf{C}$
CV1LR_uubb	$rac{4ar{G}_F}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{b}_R\gamma_\mu b_R)$	R
CV1LR_uucc	$rac{4\overset{\circ}{N_L^2}}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{c}_R\gamma_\mu c_R)$	R
CV1LR_uudd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{d}_R\gamma_\mu d_R)$	${ m R}$
CV1LR_uuss	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R)$	${ m R}$
CV1LR_uuuu	$rac{4ar{G}_{F}^{F}}{\sqrt{2}}(ar{u}_{L}\gamma^{\mu}u_{L})(ar{u}_{R}\gamma_{\mu}u_{R})$	${ m R}$
CV1RR_ccbb	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{c}_R\gamma^\mu c_R)(ar{b}_R\gamma_\mu b_R)$	${ m R}$
CV1RR_ccdd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{c}_R\gamma^\mu c_R)(\bar{d}_R\gamma_\mu d_R)$	${ m R}$
CV1RR_ccss	$rac{4ar{G}_F^F}{\sqrt{2}}(ar{c}_R\gamma^\mu c_R)(ar{s}_R\gamma_\mu s_R)$	${ m R}$
CV1RR_uubb	$rac{4ar{G}_F^F}{\sqrt{2}}(ar{u}_R\gamma^\mu u_R)(ar{b}_R\gamma_\mu b_R)$	R
CV1RR_uudd	$rac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{u}_R\gamma^\mu u_R)(ar{d}_R\gamma_\mu d_R)$	${ m R}$
CV1RR_uuss	$rac{4G_F^2}{\sqrt{2}}(ar{u}_R\gamma^\mu u_R)(ar{s}_R\gamma_\mu s_R)$	${ m R}$
CV8LL_ccbb	$rac{4G_F^2}{\sqrt{2}}(ar{c}_L\gamma^\mu T^Ac_L)(ar{b}_L\gamma_\mu T^Ab_L)$	${ m R}$
CV8LL_ccdd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{c}_L\gamma^\mu T^A c_L)(ar{d}_L\gamma_\mu T^A d_L)$	$\mathbf{R}$
CV8LL_ccss	$rac{4G_F^2}{\sqrt{2}}(ar{c}_L\gamma^\mu T^A c_L)(ar{s}_L\gamma_\mu T^A s_L)$	$\mathbf{R}$
CV8LL_uubb	$rac{4G_F^2}{\sqrt{2}}(ar{u}_L\gamma^\mu T^A u_L)(ar{b}_L\gamma_\mu T^A b_L)$	$\mathbf{R}$
CV8LL_uudd	$\frac{4\widetilde{Q}_F^2}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L)$	R
CV8LL_uuss	$rac{4G_F^2}{\sqrt{2}}(ar{u}_L\gamma^\mu T^A u_L)(ar{s}_L\gamma_\mu T^A s_L)$	R
CV8LR_bbbb	$rac{4G_F^2}{\sqrt{2}}(ar{b}_L\gamma^\mu T^A b_L)(ar{b}_R\gamma_\mu T^A b_R)$	R
CV8LR_bbcc	$rac{4G_F^2}{\sqrt{2}}(ar{b}_L\gamma^\mu T^A b_L)(ar{c}_R\gamma_\mu T^A c_R)$	R
CV8LR_bbdd	$4G_F(\bar{b}, \alpha\mu TAb)(\bar{J}, \alpha, TAJ)$	$\mathbf{R}$
CV8LR_bbss	$rac{4G_F}{\sqrt{2}}(ar{b}_L\gamma^\mu T^A b_L)(ar{s}_R\gamma_\mu T^A s_R)$	R
CV8LR_bbuu	$\frac{4Q_F^2}{\sqrt{2}}(\bar{b}_L\gamma^\mu T^A b_L)(\bar{u}_R\gamma_\mu T^A u_R)$	R
CV8LR_cbbc	$\frac{4\ddot{G}_{F}^{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}b_{L})(\bar{b}_{R}\gamma_{\mu}T^{A}c_{R})$	$\mathbf{C}$
- CV8LR_ccbb	$\frac{4G_F^2}{\sqrt{2}}(\bar{c}_L\gamma^\mu T^A c_L)(\bar{b}_R\gamma_\mu T^A b_R)$	$\mathbf{R}$
CV8LR_cccc	$\frac{4G_F^2}{\sqrt{2}}(\bar{c}_L\gamma^\mu T^A c_L)(\bar{c}_R\gamma_\mu T^A c_R)$	$\mathbf{R}$
CV8LR_ccdd	$\frac{4G_F^2}{\sqrt{2}}(\bar{c}_L\gamma^{\mu}T^Ac_L)(\bar{d}_R\gamma_{\mu}T^Ad_R)$	$\mathbf{R}$
- CV8LR_ccss	$\begin{array}{l} \frac{-\sqrt{2}}{\sqrt{2}}(b_{L}\gamma^{\mu}T^{A}b_{L})(a_{R}\gamma_{\mu}T^{A}a_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{b}_{L}\gamma^{\mu}T^{A}b_{L})(\bar{s}_{R}\gamma_{\mu}T^{A}u_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{b}_{L}\gamma^{\mu}T^{A}b_{L})(\bar{u}_{R}\gamma_{\mu}T^{A}u_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}b_{L})(\bar{b}_{R}\gamma_{\mu}T^{A}c_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}c_{L})(\bar{b}_{R}\gamma_{\mu}T^{A}b_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}c_{L})(\bar{c}_{R}\gamma_{\mu}T^{A}c_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}c_{L})(\bar{d}_{R}\gamma_{\mu}T^{A}d_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}c_{L})(\bar{s}_{R}\gamma_{\mu}T^{A}s_{R}) \\ \frac{4G_{F}}{\sqrt{2}}(\bar{c}_{L}\gamma^{\mu}T^{A}c_{L})(\bar{u}_{R}\gamma_{\mu}T^{A}u_{R}) \end{array}$	$\mathbf{R}$
- CV8LR_ccuu	$\frac{\sqrt{2}}{4G_F}(\bar{c}_L\gamma^{\mu}T^Ac_L)(\bar{u}_R\gamma_{\mu}T^Au_R)$	${ m R}$

WC name	Operator	Type
CV8LR_cddc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^{\mu}T^Ad_L)(\bar{d}_R\gamma_{\mu}T^Ac_R)$	С
CV8LR_cssc	$rac{4 \mathcal{G}_F^c}{\sqrt{2}} (ar{c}_L \gamma^\mu T^A s_L) (ar{s}_R \gamma_\mu T^A c_R)$	$\mathbf{C}$
CV8LR_dbbd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A b_L)(\bar{b}_R\gamma_\mu T^A d_R)$	$^{\mathrm{C}}$
CV8LR_ddbb	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{b}_R\gamma_\mu T^A b_R)$	${ m R}$
CV8LR_ddcc	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}T^Ad_L)(\bar{c}_R\gamma_{\mu}T^Ac_R)$	${ m R}$
CV8LR_dddd	$\frac{4\overset{\underline{G}_{F}}{\sqrt{2}}(\bar{d}_{L}\gamma^{\mu}T^{A}d_{L})(\bar{d}_{R}\gamma_{\mu}T^{A}d_{R})}{4\overset{\underline{G}_{F}}{\sqrt{2}}(\bar{d}_{L}\gamma^{\mu}T^{A}d_{L})(\bar{s}_{R}\gamma_{\mu}T^{A}s_{R})}$	$\mathbf{R}$
CV8LR_ddss	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^Ad_L)(\bar{s}_R\gamma_\mu T^As_R)$	$\mathbf{R}$
CV8LR_dduu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^Ad_L)(\bar{u}_R\gamma_\mu T^Au_R)$	${ m R}$
CV8LR_dssd	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R)$	$\mathbf{C}$
CV8LR_sbbs	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A b_L)(\bar{b}_R\gamma_\mu T^A s_R)$	$\mathbf{C}$
CV8LR_ssbb	$rac{4G_F}{\sqrt{2}}(ar{s}_L\gamma^\mu T^A s_L)(ar{b}_R\gamma_\mu T^A b_R)$	$\mathbf{R}$
CV8LR_sscc	$rac{4G_F^2}{\sqrt{2}}(ar{s}_L\gamma^\mu T^A s_L)(ar{c}_R\gamma_\mu T^A c_R)$	$\mathbf{R}$
CV8LR_ssdd	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(d_R\gamma_\mu T^A d_R)$	$\mathbf{R}$
CV8LR_ssss	$rac{4G_F}{\sqrt{2}}(ar{s}_L\gamma^\mu T^A s_L)(ar{s}_R\gamma_\mu T^A s_R)$	$\mathbf{R}$
CV8LR_ssuu	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R)$	$\mathbf{R}$
CV8LR_ubbu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A b_L)(\bar{b}_R\gamma_\mu T^A u_R)$	$\mathbf{C}$
CV8LR_uccu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A c_L)(\bar{c}_R\gamma_\mu T^A u_R)$	$\mathbf{C}$
CV8LR_uddu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A d_L)(\bar{d}_R\gamma_\mu T^A u_R)$	$^{\mathrm{C}}$
CV8LR_ussu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A u_R)$	$\mathbf{C}$
CV8LR_uubb	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{b}_R\gamma_\mu T^A b_R)$	$\mathbf{R}$
CV8LR_uucc	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{c}_R\gamma_\mu T^A c_R)$	$\mathbf{R}$
CV8LR_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{d}_R\gamma_{\mu}T^Ad_R)$	$\mathbf{R}$
CV8LR_uuss	$rac{4\dot{G}_F}{\sqrt{2}}(ar{u}_L\gamma^\mu T^A u_L)(ar{s}_R\gamma_\mu T^A s_R)$	$\mathbf{R}$
CV8LR_uuuu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{u}_R\gamma_{\mu}T^Au_R)$	$\mathbf{R}$
CV8RR_ccbb	$\frac{4G_F}{\sqrt{2}}(\bar{c}_R\gamma^\mu T^A c_R)(\bar{b}_R\gamma_\mu T^A b_R)$	$\mathbf{R}$
CV8RR_ccdd	$\frac{4G_F}{\sqrt{2}}(\bar{c}_R\gamma^\mu T^Ac_R)(\bar{d}_R\gamma_\mu T^Ad_R)$	$\mathbf{R}$
CV8RR_ccss	$\frac{\frac{4\check{G}_F}{\sqrt{2}}(\bar{c}_R\gamma^{\mu}T^Ac_R)(\bar{s}_R\gamma_{\mu}T^As_R)}{\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{b}_R\gamma_{\mu}T^Ab_R)}$	$\mathbf{R}$
CV8RR_uubb	$\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{b}_R\gamma_{\mu}T^Ab_R)$	$\mathbf{R}$
CV8RR_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{d}_R\gamma_{\mu}T^Ad_R)$	$\mathbf{R}$
CV8RR_uuss	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{s}_R\gamma_{\mu}T^As_R)$	$\mathbf{R}$
CVLL_bbbb	$rac{4 \stackrel{.}{G_F}}{\sqrt{2}} (ar{b}_L \gamma^\mu b_L) (ar{b}_L \gamma_\mu b_L) \ rac{4 \stackrel{.}{G_F}}{\sqrt{2}} (ar{c}_L \gamma^\mu c_L) (ar{c}_L \gamma_\mu c_L)$	$\mathbf{R}$
CVLL_cccc	$rac{4 ar{G}_F}{\sqrt{2}} (ar{c}_L \gamma^\mu c_L) (ar{c}_L \gamma_\mu c_L)$	$\mathbf{R}$
CVLL_dbbd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu b_L)(ar{b}_L\gamma_\mu d_L)$	$\mathbf{R}$
CVLL_ddbb	$\frac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{b}_L\gamma_\mu b_L)$	${ m R}$
CVLL_dddd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{d}_L\gamma_\mu d_L)$	${ m R}$
CVLL_ddss	$\begin{array}{c} \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}b_L)(\bar{b}_L\gamma_{\mu}d_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{b}_L\gamma_{\mu}b_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{d}_L\gamma_{\mu}d_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{s}_L\gamma_{\mu}d_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{s}_L\gamma_{\mu}s_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}s_L)(\bar{s}_L\gamma_{\mu}d_L) \end{array}$	${ m R}$
CVLL_dssd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu s_L)(ar{s}_L\gamma_\mu d_L)$	${ m R}$

WC name	Operator	Type
CVLL_eebb	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{b}_L\gamma_{\mu}b_L)$	R
CVLL_eecc	$\frac{4G_F^c}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{c}_L\gamma_{\mu}c_L)$	R
CVLL_eedd	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{d}_L\gamma_{\mu}d_L)$	${ m R}$
CVLL_eeee	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{e}_L\gamma_{\mu}e_L)$	${ m R}$
CVLL_eemumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{\mu}_L\gamma_{\mu}\mu_L)$	${ m R}$
CVLL_eess	$rac{4\ddot{G}_{F}}{\sqrt{2}}(ar{e}_{L}\gamma^{\mu}e_{L})(ar{s}_{L}\gamma_{\mu}s_{L})$	${ m R}$
CVLL_eetautau	$rac{4G_F^C}{\sqrt{2}}(ar{e}_L\gamma^\mu e_L)(ar{ au}_L\gamma_\mu au_L)$	${ m R}$
CVLL_eeuu	$\frac{4G_F^2}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{u}_L\gamma_{\mu}u_L)$	${ m R}$
CVLL_mumubb	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{b}_L\gamma_\mu b_L)$	R
CVLL_mumucc	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{c}_L\gamma_\mu c_L)$	R
CVLL_mumudd	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{d}_L\gamma_\mu d_L)$	R
CVLL_mumumumu	$rac{4\ddot{G}_F^2}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{\mu}_L\gamma_\mu\mu_L)$	R
CVLL_mumuss	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{s}_L\gamma_\mu s_L)$	R
CVLL_mumutautau	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{ au}_L\gamma_\mu au_L)$	R
CVLL_mumuuu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{u}_L\gamma_\mu u_L)$	${ m R}$
CVLL_sbbs	$rac{4\ddot{G}_{F}}{\sqrt{2}}(ar{s}_{L}\gamma^{\mu}b_{L})(ar{b}_{L}\gamma_{\mu}s_{L})$	${ m R}$
CVLL_ssbb	$rac{4G_F^2}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{b}_L\gamma_\mu b_L)$	${ m R}$
CVLL_ssss	$rac{4G_F^C}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{s}_L\gamma_\mu s_L)$	${ m R}$
CVLL_tautaubb	$rac{4G_F^c}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{b}_L\gamma_\mu b_L)$	${ m R}$
CVLL_tautaucc	$rac{4\overset{\circ}{G_{E}}}{\sqrt{2}}(ar{ au}_{L}\gamma^{\mu} au_{L})(ar{c}_{L}\gamma_{\mu}c_{L})$	R
CVLL_tautaudd	$rac{4G_F^2}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{d}_L\gamma_\mu d_L)$	$\mathbf{R}$
CVLL_tautauss	$rac{4G_F^C}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{s}_L\gamma_\mu s_L)$	$\mathbf{R}$
CVLL_tautautauta	$\mathrm{u}rac{4G_F^C}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{ au}_L\gamma_\mu au_L)$	$\mathbf{R}$
CVLL_tautauuu	$rac{4G_F^2}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{u}_L\gamma_\mu u_L)$	${ m R}$
CVLL_uccu	$rac{4G_F^2}{\sqrt{2}}(ar{u}_L\gamma^\mu c_L)(ar{c}_L\gamma_\mu u_L)$	${ m R}$
CVLL_uucc	$\frac{4G_F^2}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{c}_L\gamma_\mu c_L)$	$\mathbf{R}$
CVLL_uuuu	$\frac{4G_F^2}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_L\gamma_\mu u_L)$	$\mathbf{R}$
CVLR_bbee	$\frac{4G_F^2}{\sqrt{2}}(\bar{b}_L\gamma^\mu b_L)(\bar{e}_R\gamma_\mu e_R)$	$\mathbf{R}$
CVLR_bbmumu	$rac{4G_F^2}{\sqrt{2}}(ar{b}_L\gamma^\mu b_L)(ar{\mu}_R\gamma_\mu\mu_R)$	$\mathbf{R}$
CVLR_bbtautau	$rac{4G_F}{\sqrt{2}}(ar{b}_L\gamma^\mu b_L)(ar{ au}_R\gamma_\mu au_R)$	$\mathbf{R}$
CVLR_ccee	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^{\mu}c_L)(\bar{e}_R\gamma_{\mu}e_R)$	${ m R}$
CVLR_ccmumu	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^{\mu}c_L)(\bar{e}_R\gamma_{\mu}e_R)}{\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^{\mu}c_L)(\bar{\mu}_R\gamma_{\mu}\mu_R)}$	R
- CVLR_cctautau	$\frac{4G_F}{\sqrt{2}}(\bar{c}_L\gamma^{\mu}c_L)(\bar{\tau}_R\gamma_{\mu}\tau_R)$	R
- CVLR_ddee	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{e}_R\gamma_\mu e_R)$	R
- CVLR_ddmumu	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{e}_R\gamma_{\mu}e_R)}{\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{\mu}_R\gamma_{\mu}\mu_R)}$ $\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{\tau}_R\gamma_{\mu}\tau_R)$ $\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{b}_R\gamma_{\mu}b_R)$	R
- CVLR_ddtautau	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{\tau}_R\gamma_\mu \tau_R)$	R
- CVLR_eebb	$\frac{4G_F}{\bar{e}_I}(\bar{e}_I\gamma^{\mu}e_I)(\bar{b}_B\gamma_{\nu}b_B)$	${ m R}$

WC name	Operator	Type
CVLR_eecc	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{c}_R\gamma_{\mu}c_R)$	R
CVLR_eedd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{d}_R\gamma_{\mu}d_R)$	$\mathbf{R}$
CVLR_eeee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{e}_R\gamma_{\mu}e_R)$	$\mathbf{R}$
CVLR_eemumu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{\mu}_R\gamma_{\mu}\mu_R)$	$\mathbf{R}$
CVLR_eess	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{s}_R\gamma_{\mu}s_R)$	$\mathbf{R}$
CVLR_eetautau	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{\tau}_R\gamma_{\mu}\tau_R)$	R
CVLR_eeuu	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{u}_R\gamma_{\mu}u_R)$	$\mathbf{R}$
CVLR_emumue	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^\mu\mu_L)(\bar{\mu}_R\gamma_\mu e_R)$	$\mathbf{C}$
CVLR_etautaue	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^\mu\tau_L)(\bar{\tau}_R\gamma_\mu e_R)$	$\mathbf{C}$
CVLR_mumubb	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{b}_R\gamma_\mu b_R)$	R
CVLR_mumucc	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{c}_R\gamma_\mu c_R)$	R
CVLR_mumudd	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{d}_R\gamma_\mu d_R)$	R
CVLR_mumuee	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{e}_R\gamma_\mu e_R)$	R
CVLR_mumumumu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_mumuss	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{s}_R\gamma_\mu s_R)$	R
CVLR_mumutautau	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{ au}_R\gamma_\mu au_R)$	R
CVLR_mumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{u}_R\gamma_\mu u_R)$	R
CVLR_mutautaumu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu au_L)(\bar{ au}_R\gamma_\mu\mu_R)$	$\mathbf{C}$
CVLR_ssee	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{e}_R\gamma_\mu e_R)$	R
CVLR_ssmumu	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_sstautau	$rac{4G_F}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{ au}_R\gamma_\mu au_R)$	R
CVLR_tautaubb	$rac{4G_F}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{b}_R\gamma_\mu b_R)$	R
CVLR_tautaucc	$\frac{4G_F}{\sqrt{2}}(\bar{ au}_L\gamma^\mu au_L)(\bar{c}_R\gamma_\mu c_R)$	R
CVLR_tautaudd	$rac{4G_F}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{d}_R\gamma_\mu d_R)$	R
CVLR_tautauee	$\frac{4G_F}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{e}_R\gamma_\mu e_R)$	R
CVLR_tautaumumu	$\frac{4G_F}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_tautauss	$rac{4G_F}{\sqrt{2}}(ar{ au}_L\gamma^\mu au_L)(ar{s}_R\gamma_\mu s_R)$	R
CVLR_tautautautau	$1 \frac{4G_F}{\sqrt{2}} (ar{ au}_L \gamma^\mu  au_L) (ar{ au}_R \gamma_\mu  au_R)$	R
CVLR_tautauuu	$\frac{4G_F}{\sqrt{2}}(\bar{\tau}_L\gamma^\mu\tau_L)(\bar{u}_R\gamma_\mu u_R)$	R
CVLR_uuee	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{e}_R\gamma_\mu e_R)$	R
CVLR_uumumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_uutautau	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{ au}_R\gamma_\mu au_R)$	R
CVRR_bbbb	$\frac{4G_F}{\sqrt{2}}(b_R\gamma^\mu b_R)(b_R\gamma_\mu b_R)$	R
CVRR_cccc	$\frac{4G_F}{\sqrt{2}}(\bar{c}_R\gamma^\mu c_R)(\bar{c}_R\gamma_\mu c_R)$	R
CVRR_dbbd	$\frac{4G_F}{\sqrt{2}}(d_R\gamma^\mu b_R)(b_R\gamma_\mu d_R)$	R
CVRR_ddbb	$\frac{4G_F}{\sqrt{2}}(d_R\gamma^\mu d_R)(b_R\gamma_\mu b_R)$	R
CVRR_dddd	$\begin{array}{l} \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{\nu}_R \gamma_\mu \mu_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{\mu}_R \gamma_\mu \mu_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{\tau}_R \gamma_\mu \tau_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{b}_R \gamma^\mu b_R) (\bar{b}_R \gamma_\mu b_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{c}_R \gamma^\mu c_R) (\bar{c}_R \gamma_\mu c_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{d}_R \gamma^\mu b_R) (\bar{b}_R \gamma_\mu d_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{d}_R \gamma^\mu d_R) (\bar{b}_R \gamma_\mu b_R) \\ \frac{4G_F}{\sqrt{2}} (\bar{d}_R \gamma^\mu d_R) (\bar{d}_R \gamma_\mu d_R) \end{array}$	R

WC name	Operator	Type
CVRR_ddss	$\frac{4G_F}{\sqrt{2}}(\bar{d}_R\gamma^\mu d_R)(\bar{s}_R\gamma_\mu s_R)$	R
CVRR_dssd	$\frac{4\overset{\circ}{N_{-}}}{\sqrt{2}}(\bar{d}_R\gamma^{\mu}s_R)(\bar{s}_R\gamma_{\mu}d_R)$	R
CVRR_eebb	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{b}_R\gamma_{\mu}b_R)$	R
CVRR_eecc	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{c}_R\gamma_{\mu}c_R)$	R
CVRR_eedd	$\frac{4G_F}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{d}_R\gamma_{\mu}d_R)$	R
CVRR_eeee	$\frac{4G_F}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{e}_R\gamma_{\mu}e_R)$	R
CVRR_eemumu	$\frac{4G_F}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{\mu}_R\gamma_{\mu}\mu_R)$	R
CVRR_eess	$\frac{4G_F}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{s}_R\gamma_{\mu}s_R)$	R
CVRR_eetautau	$\frac{4G_F}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{\tau}_R\gamma_{\mu}\tau_R)$	R
CVRR_eeuu	$\frac{4G_F}{\sqrt{2}}(\bar{e}_R\gamma^{\mu}e_R)(\bar{u}_R\gamma_{\mu}u_R)$	R
CVRR_mumubb	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{b}_R\gamma_\mu b_R)$	R
CVRR_mumucc	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{c}_R\gamma_\mu c_R)$	R
CVRR_mumudd	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{d}_R\gamma_\mu d_R)$	R
CVRR_mumumumu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVRR_mumuss	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{s}_R\gamma_\mu s_R)$	R
CVRR_mumutautau	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{\tau}_R\gamma_\mu\tau_R)$	R
CVRR_mumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{u}_R\gamma_\mu u_R)$	R
CVRR_sbbs	$\frac{4G_F}{\sqrt{2}}(\bar{s}_R\gamma^{\mu}b_R)(\bar{b}_R\gamma_{\mu}s_R)$	R
CVRR_ssbb	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{s}_R\gamma^{\mu}s_R)(\bar{b}_R\gamma_{\mu}b_R)$	R
CVRR_ssss	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{s}_R\gamma^{\mu}s_R)(\bar{s}_R\gamma_{\mu}s_R)$	R
CVRR_tautaubb	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{ au}_R\gamma^\mu au_R)(\bar{b}_R\gamma_\mu b_R)$	R
CVRR_tautaucc	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{ au}_R\gamma^{\mu} au_R)(\bar{c}_R\gamma_{\mu}c_R)$	R
CVRR_tautaudd	$\frac{4\overleftarrow{G_F}}{\sqrt{2}}(\bar{ au}_R\gamma^\mu au_R)(\bar{d}_R\gamma_\mu d_R)$	R
CVRR_tautauss	$\frac{4G_F}{\sqrt{2}}(\bar{\tau}_R\gamma^\mu\tau_R)(\bar{s}_R\gamma_\mu s_R)$	R
CVRR_tautautautau	$1 \frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{ au}_R \gamma^\mu  au_R) (\bar{ au}_R \gamma_\mu  au_R)$	R
CVRR_tautauuu	$\frac{4\overset{\leftarrow}{\delta_F}}{\sqrt{2}}(\bar{\tau}_R\gamma^\mu\tau_R)(\bar{u}_R\gamma_\mu u_R)$	R
CVRR_uccu	$\frac{4\overset{C}{G_F}}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}c_R)(\bar{c}_R\gamma_{\mu}u_R)$	R
CVRR_uucc	$\frac{4\overset{C}{G_F}}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}u_R)(\bar{c}_R\gamma_{\mu}c_R)$	R
CVRR_uuuu	$\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}u_R)(\bar{u}_R\gamma_{\mu}u_R)$	R

### ${\tt mue}$

WC name	Operator	Type
Cgamma_mue	$ar{e}_L \sigma^{\mu u} \mu_R  F_{\mu u}$	C
Cgamma_emu	$ar{\mu}_L \sigma^{\mu  u} e_R  F_{\mu  u}$	$\mathbf{C}$
CVLL_eemue	$(ar{e}_L\gamma^\mu e_L)(ar{e}_L\gamma_\mu\mu_L)$	$\mathbf{C}$
CVLL_muemumu	$(ar{e}_L \gamma^\mu \mu_L)(ar{\mu}_L \gamma_\mu \mu_L)$	$^{\mathrm{C}}$

WC name	Operator	Type
CVLL_muetautau	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{\tau}_L \gamma_\mu \tau_L)$	С
CVLL_mueuu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{u}_L \gamma_\mu u_L)$	$\mathbf{C}$
CVLL_muecc	$(ar{e}_L \gamma^\mu \mu_L) (ar{c}_L \gamma_\mu c_L)$	$^{\mathrm{C}}$
CVLL_muedd	$(ar{e}_L \gamma^\mu \mu_L) (ar{d}_L \gamma_\mu d_L)$	$^{\mathrm{C}}$
CVLL_muess	$(ar{e}_L \gamma^\mu \mu_L) (ar{s}_L \gamma_\mu s_L)$	$^{\mathrm{C}}$
CVLL_muebb	$(ar{e}_L \gamma^\mu \mu_L) (ar{b}_L \gamma_\mu b_L)$	$^{\mathrm{C}}$
CVRR_eemue	$(ar{e}_R \gamma^\mu e_R)(ar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVRR_muemumu	$(ar{e}_R\gamma^\mu\mu_R)(ar{\mu}_R\gamma_\mu\mu_R)$	$\mathbf{C}$
CVRR_muetautau	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{\tau}_R \gamma_\mu \tau_R)$	$\mathbf{C}$
CVRR_mueuu	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{u}_R \gamma_\mu u_R)$	$^{\mathrm{C}}$
CVRR_muecc	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{c}_R \gamma_\mu c_R)$	$\mathbf{C}$
CVRR_muedd	$(ar{e}_R \gamma^\mu \mu_R) (ar{d}_R \gamma_\mu d_R)$	$\mathbf{C}$
CVRR_muess	$(ar{e}_R \gamma^\mu \mu_R) (ar{s}_R \gamma_\mu s_R)$	$\mathbf{C}$
CVRR_muebb	$(ar{e}_R \gamma^\mu \mu_R) (ar{b}_R \gamma_\mu b_R)$	$\mathbf{C}$
CVLR_eemue	$(ar{e}_L \gamma^\mu e_L)(ar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_mueee	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{e}_R \gamma_\mu e_R)$	$\mathbf{C}$
CVLR_muemumu	$(ar{e}_L \gamma^\mu \mu_L)(ar{\mu}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_muetautau	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{ au}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_tauemutau	$(ar{e}_L \gamma^\mu  au_L)(ar{ au}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_mumumue	$(ar{\mu}_L \gamma^\mu \mu_L) (ar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_taumuetau	$(ar{\mu}_L \gamma^\mu  au_L)(ar{ au}_R \gamma_\mu e_R)$	$\mathbf{C}$
CVLR_tautaumue	$(ar{ au}_L\gamma^\mu au_L)(ar{e}_R\gamma_\mu\mu_R)$	$\mathbf{C}$
CVLR_mueuu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{u}_R \gamma_\mu u_R)$	$\mathbf{C}$
CVLR_muecc	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{c}_R \gamma_\mu c_R)$	$\mathbf{C}$
CVLR_muedd	$(ar{e}_L \gamma^\mu \mu_L) (ar{d}_R \gamma_\mu d_R)$	$\mathbf{C}$
CVLR_muess	$(ar{e}_L \gamma^\mu \mu_L) (ar{s}_R \gamma_\mu s_R)$	$\mathbf{C}$
CVLR_muebb	$(ar{e}_L \gamma^\mu \mu_L) (ar{b}_R \gamma_\mu b_R)$	$\mathbf{C}$
CVLR_uumue	$(\bar{u}_L \gamma^\mu u_L)(\bar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_ccmue	$(ar{c}_L \gamma^\mu c_L) (ar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_ddmue	$(ar{d}_L \gamma^\mu d_L) (ar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_ssmue	$(ar{s}_L \gamma^\mu s_L)(ar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_bbmue	$(ar{b}_L \gamma^\mu b_L) (ar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CSRL_mueuu	$(ar{e}_L\mu_R)(ar{u}_Ru_L)$	$\mathbf{C}$
CSRL_muecc	$(ar{e}_L\mu_R)(ar{c}_Rc_L)$	$\mathbf{C}$
CSRL_emuuu	$(ar{\mu}_L e_R)(ar{u}_R u_L)$	$\mathbf{C}$
CSRL_emucc	$(ar{\mu}_L e_R)(ar{c}_R c_L)$	$\mathbf{C}$
CSRL_muedd	$(ar{e}_L\mu_R)(ar{d}_Rd_L)$	$\mathbf{C}$
CSRL_muess	$(ar{e}_L\mu_R)(ar{s}_Rs_L)$	$\mathbf{C}$
CSRL_muebb	$(ar{e}_L\mu_R)(ar{b}_Rb_L)$	$^{\mathrm{C}}$
CSRL_emudd	$(ar{\mu}_L e_R)(ar{d}_R d_L)$	$^{\mathrm{C}}$
CSRL_emuss	$(ar{\mu}_L e_R)(ar{s}_R s_L)$	$^{\mathrm{C}}$
CSRL_emubb	$(ar{\mu}_L e_R)(ar{b}_R b_L)$	$^{\mathrm{C}}$
CSRR_eemue	$(ar{e}_L e_R)(ar{e}_L \mu_R)$	C
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WC name	Operator	Type
CSRR_eeemu	$(ar{e}_L e_R)(ar{\mu}_L e_R)$	C
CSRR_muemumu	$(ar{e}_L\mu_R)(ar{\mu}_L\mu_R)$	$^{\mathrm{C}}$
CSRR_muetautau	$(ar{e}_L\mu_R)(ar{ au}_L au_R)$	$^{\mathrm{C}}$
CSRR_tauemutau	$(ar{e}_L au_R)(ar{ au}_L\mu_R)$	$^{\mathrm{C}}$
CSRR_emumumu	$(ar{\mu}_L e_R)(ar{\mu}_L \mu_R)$	$\mathbf{C}$
CSRR_emutautau	$(ar{\mu}_L e_R)(ar{ au}_L  au_R)$	$\mathbf{C}$
CSRR_taumuetau	$(ar{\mu}_L au_R)(ar{ au}_Le_R)$	$\mathbf{C}$
CSRR_mueuu	$(ar{e}_L\mu_R)(ar{u}_Lu_R)$	$\mathbf{C}$
CSRR_muecc	$(ar{e}_L\mu_R)(ar{c}_Lc_R)$	$\mathbf{C}$
CSRR_emuuu	$(ar{\mu}_L e_R)(ar{u}_L u_R)$	$\mathbf{C}$
CSRR_emucc	$(ar{\mu}_L e_R)(ar{c}_L c_R)$	$^{\mathrm{C}}$
CTRR_mueuu	$(\bar{e}_L \sigma^{\mu  u} \mu_R) (\bar{u}_L \sigma_{\mu  u} u_R)$	$^{\mathrm{C}}$
CTRR_muecc	$(\bar{e}_L \sigma^{\mu\nu} \mu_R)(\bar{c}_L \sigma_{\mu\nu} c_R)$	С
CTRR_emuuu	$(\bar{\mu}_L \sigma^{\mu\nu} e_R)(\bar{u}_L \sigma_{\mu\nu} u_R)$	C
CTRR_emucc	$(\bar{\mu}_L \sigma^{\mu  u} e_{\underline{R}})(\bar{c}_L \sigma_{\mu  u} c_R)$	$^{\mathrm{C}}$
CSRR_muedd	$(ar{e}_L\mu_R)(d_Ld_R)$	С
CSRR_muess	$(ar{e}_L\mu_R)(ar{s}_Ls_R)$	С
CSRR_muebb	$(ar{e}_L\mu_R)(ar{b}_{\! L}b_R)$	С
CSRR_emudd	$(ar{\mu}_L e_R)(ar{d}_L d_R)$	$^{\mathrm{C}}$
CSRR_emuss	$(ar{\mu}_L e_R)(ar{ar{s}}_L s_R)$	С
CSRR_emubb	$(ar{\mu}_L e_R)(b_L b_{R})$	$\mathbf{C}$
CTRR_muedd	$(ar{e}_L \sigma^{\mu u} \mu_R) (ar{d}_L \sigma_{\mu u} d_R)$	$^{\mathrm{C}}$
CTRR_muess	$(\bar{e}_L \sigma^{\mu\nu} \mu_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	$\mathbf{C}$
CTRR_muebb	$(ar{e}_L \sigma^{\mu u} \mu_R) (ar{b}_L \sigma_{\mu u} b_R)$	$^{\mathrm{C}}$
CTRR_emudd	$(ar{\mu}_L \sigma^{\mu  u} e_R) (ar{d}_L \sigma_{\mu  u} d_R)$	$^{\mathrm{C}}$
CTRR_emuss	$(\bar{\mu}_L \sigma^{\mu  u} e_R)(\bar{s}_L \sigma_{\mu  u} s_R)$	$^{\mathrm{C}}$
CTRR_emubb	$(ar{\mu}_L \sigma^{\mu  u} e_R) (ar{b}_L \sigma_{\mu  u} b_R)$	C

#### mutau

WC name	Operator	Type
Cgamma_taumu	$\bar{\mu}_L \sigma^{\mu\nu} \tau_R  F_{\mu\nu}$	C
Cgamma_mutau	$ar{ au}_L \sigma^{\mu u} \mu_R  F_{\mu u}$	$\mathbf{C}$
CVLL_eetaumu	$(ar{e}_L \gamma^\mu e_L)(\dot{ar{\mu}}_L \gamma_\mu  au_L)$	$\mathbf{C}$
CVLL_mumutaumu	$(\bar{\mu}_L \gamma^\mu \mu_L)(\bar{\mu}_L \dot{\gamma}_\mu \tau_L)$	$\mathbf{C}$
${\tt CVLL\_taumutautau}$	$(ar{\mu}_L \gamma^\mu  au_L) (ar{ au}_L \gamma_\mu  au_L)$	$^{\mathrm{C}}$
CVLL_taumuuu	$(\bar{\mu}_L \gamma^\mu  au_L)(\bar{u}_L \gamma_\mu u_L)$	$^{\mathrm{C}}$
CVLL_taumucc	$(ar{\mu}_L \gamma^\mu  au_L) (ar{c}_L \gamma_\mu c_L)$	$\mathbf{C}$
CVLL_taumudd	$(ar{\mu}_L \gamma^\mu  au_L) (ar{d}_L \gamma_\mu d_L)$	$\mathbf{C}$
CVLL_taumuss	$(ar{\mu}_L \gamma^\mu  au_L) (ar{s}_L \gamma_\mu s_L)$	$\mathbf{C}$
CVLL_taumubb	$(ar{\mu}_L \gamma^\mu  au_L) (ar{b}_L \gamma_\mu b_L)$	C
CVRR_eetaumu	$(ar{e}_R\gamma^\mu e_R)(ar{\mu}_R\gamma_\mu au_R)$	$^{\mathrm{C}}$

WC name	Operator	Type
CVRR_mumutaumu	$(\bar{\mu}_R \gamma^\mu \mu_R)(\bar{\mu}_R \gamma_\mu \tau_R)$	С
CVRR_taumutautau	$(\bar{\mu}_R \gamma^\mu \tau_R)(\bar{\tau}_R \gamma_\mu \tau_R)$	$\mathbf{C}$
CVRR_taumuuu	$(\bar{\mu}_R \gamma^\mu \tau_R)(\bar{u}_R \gamma_\mu u_R)$	$\mathbf{C}$
CVRR_taumucc	$(ar{\mu}_R \gamma^\mu  au_R) (ar{c}_R \gamma_\mu c_R)$	$^{\mathrm{C}}$
CVRR_taumudd	$(\bar{\mu}_R \gamma^\mu  au_R) (\bar{d}_R \gamma_\mu d_R)$	$^{\mathrm{C}}$
CVRR_taumuss	$(\bar{\mu}_R \gamma^\mu  au_R)(\bar{s}_R \gamma_\mu s_R)$	$\mathbf{C}$
CVRR_taumubb	$(\bar{\mu}_R \gamma^\mu  au_R) (\bar{b}_R \gamma_\mu b_R)$	$\mathbf{C}$
CVLR_eetaumu	$(ar{e}_L \gamma^\mu e_L)(ar{\mu}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_mueetau	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{ au}_R \gamma_\mu e_R)$	$\mathbf{C}$
CVLR_taueemu	$(ar{e}_L \gamma^\mu  au_L) (ar{\mu}_R \gamma_\mu e_R)$	$\mathbf{C}$
CVLR_mumutaumu	$(\bar{\mu}_L \gamma^\mu \mu_L)(\bar{\mu}_R \gamma_\mu \tau_R)$	$\mathbf{C}$
CVLR_taumuee	$(\bar{\mu}_L \gamma^\mu  au_L)(\bar{e}_R \gamma_\mu e_R)$	$^{\mathrm{C}}$
CVLR_taumumumu	$(ar{\mu}_L \gamma^\mu  au_L)(ar{\mu}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVLR_taumutautau	$(ar{\mu}_L \gamma^\mu  au_L) (ar{ au}_R \gamma_\mu  au_R)$	$^{\mathrm{C}}$
CVLR_tautautaumu	$(ar{ au}_L \gamma^\mu  au_L) (ar{\mu}_R \gamma_\mu  au_R)$	$^{\mathrm{C}}$
CVLR_taumuuu	$(\bar{\mu}_L \gamma^\mu  au_L)(\bar{u}_R \gamma_\mu u_R)$	$^{\mathrm{C}}$
CVLR_taumucc	$(ar{\mu}_L \gamma^\mu  au_L) (ar{c}_R \gamma_\mu c_R)$	$^{\mathrm{C}}$
CVLR_taumudd	$(\bar{\mu}_L \gamma^\mu  au_L)(d_R \gamma_\mu d_R)$	$\mathbf{C}$
CVLR_taumuss	$(ar{\mu}_L \gamma^\mu  au_L) (ar{s}_R \gamma_\mu s_R)$	$\mathbf{C}$
CVLR_taumubb	$(ar{\mu}_L \gamma^\mu  au_L)(b_R \gamma_\mu b_R)$	$\mathbf{C}$
CVLR_uutaumu	$(\bar{u}_L \gamma^\mu u_L)(\bar{\mu}_R \gamma_\mu \tau_R)$	$\mathbf{C}$
CVLR_cctaumu	$(ar{c}_L \gamma^\mu c_L) (ar{\mu}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_ddtaumu	$(ar{d}_L \gamma^\mu d_L) (ar{\mu}_R \gamma_\mu  au_R)$	$^{\mathrm{C}}$
CVLR_sstaumu	$(ar{s}_L \gamma^\mu s_L) (ar{\mu}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_bbtaumu	$(ar{b}_L \gamma^\mu b_L) (ar{\mu}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CSRL_taumuuu	$(ar{\mu}_L au_R)(ar{u}_Ru_L)$	$\mathbf{C}$
CSRL_taumucc	$(ar{\mu}_L au_R)(ar{c}_Rc_L)$	$\mathbf{C}$
CSRL_mutauuu	$(ar{ au}_L \mu_R)(ar{u}_R u_L)$	$\mathbf{C}$
CSRL_mutaucc	$(ar{ au}_L \mu_R)(ar{c}_R c_L)$	$\mathbf{C}$
CSRL_taumudd	$(ar{\mu}_L au_R)(ar{d}_Rd_L)$	$\mathbf{C}$
CSRL_taumuss	$(ar{\mu}_L au_R)(ar{s}_Rs_L)$	$\mathbf{C}$
CSRL_taumubb	$(ar{\mu}_L au_R)(ar{b}_Rb_L)$	$^{\mathrm{C}}$
CSRL_mutaudd	$(ar{ au}_L \mu_R)(ar{d}_R d_L)$	$^{\mathrm{C}}$
CSRL_mutauss	$(ar{ au}_L\mu_R)(ar{s}_Rs_L)$	$^{\mathrm{C}}$
CSRL_mutaubb	$(ar{ au}_L \mu_R)(ar{b}_R b_L)$	$^{\mathrm{C}}$
CSRR_eetaumu	$(\bar{e}_L e_R)(\bar{\mu}_L  au_R)$	$^{\mathrm{C}}$
CSRR_eemutau	$(ar{e}_L e_R)(ar{ au}_L \mu_R)$	C
CSRR_mueetau	$(ar{e}_L\mu_R)(ar{ au}_Le_R)$	C
CSRR_taueemu	$(ar{e}_L au_R)(ar{\mu}_Le_R)$	$^{\mathrm{C}}$
CSRR_mumutaumu	$(ar{\mu}_L\mu_R)(ar{\mu}_L au_R)$	$^{\mathrm{C}}$
CSRR_mumumutau	$(ar{\mu}_L \mu_R)(ar{ au}_L \mu_R)$	$\mathbf{C}$
CSRR_taumutautau	$(ar{\mu}_L au_R)(ar{ au}_L au_R)$	$\mathbf{C}$
CSRR_mutautautau	$(ar{ au}_L\mu_R)(ar{ au}_L au_R)$	С

WC name	Operator	Type
CSRR_taumuuu	$(ar{\mu}_L au_R)(ar{u}_Lu_R)$	C
CSRR_taumucc	$(ar{\mu}_L au_R)(ar{c}_Lc_R)$	$^{\mathrm{C}}$
CSRR_mutauuu	$(ar{ au}_L\mu_R)(ar{u}_Lu_R)$	$^{\mathrm{C}}$
CSRR_mutaucc	$(ar{ au}_L\mu_R)(ar{c}_Lc_R)$	$^{\mathrm{C}}$
CTRR_taumuuu	$(ar{\mu}_L\sigma^{\mu u} au_R)(ar{u}_L\sigma_{\mu u}u_R)$	$^{\mathrm{C}}$
CTRR_taumucc	$(ar{\mu}_L\sigma^{\mu u} au_R)(ar{c}_L\sigma_{\mu u}c_R)$	$^{\mathrm{C}}$
CTRR_mutauuu	$(\bar{ au}_L \sigma^{\mu u} \mu_R)(\bar{u}_L \sigma_{\mu u} u_R)$	$\mathbf{C}$
CTRR_mutaucc	$(ar{ au}_L \sigma^{\mu u} \mu_R) (ar{c}_L \sigma_{\mu u} c_R)$	$\mathbf{C}$
CSRR_taumudd	$(ar{\mu}_L au_R)(ar{d}_Ld_R)$	$^{\mathrm{C}}$
CSRR_taumuss	$(ar{\mu}_L au_R)(ar{s}_Ls_R)$	$\mathbf{C}$
CSRR_taumubb	$(ar{\mu}_L au_R)(ar{b}_Lb_R)$	$^{\mathrm{C}}$
CSRR_mutaudd	$(ar{ au}_L\mu_R)(ar{d}_Ld_R)$	$^{\mathrm{C}}$
CSRR_mutauss	$(ar{ au}_L\mu_R)(ar{s}_Ls_R)$	$^{\mathrm{C}}$
CSRR_mutaubb	$(ar{ au}_L \mu_R)(ar{b}_L b_R)$	$^{\mathrm{C}}$
CTRR_taumudd	$(ar{\mu}_L\sigma^{\mu u} au_R)(ar{d}_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
CTRR_taumuss	$(ar{\mu}_L \sigma^{\mu u}  au_R) (ar{s}_L \sigma_{\mu u} s_R)$	$^{\mathrm{C}}$
CTRR_taumubb	$(ar{\mu}_L\sigma^{\mu u} au_R)(ar{b}_L\sigma_{\mu u}b_R)$	$\mathbf{C}$
CTRR_mutaudd	$(ar au_L \sigma^{\mu u} \mu_R) (ar d_L \sigma_{\mu u} d_R)$	$\mathbf{C}$
CTRR_mutauss	$(ar{ au}_L \sigma^{\mu u} \mu_R) (ar{s}_L \sigma_{\mu u} s_R)$	$\mathbf{C}$
CTRR_mutaubb	$(ar{ au}_L\sigma^{\mu u}\mu_R)(ar{b}_L\sigma_{\mu u}b_R)$	C

## taue

WC name	Operator	Type
Cgamma_taue	$ar{e}_L \sigma^{\mu u}  au_R  F_{\mu u}$	C
Cgamma_etau	$ar{ au}_L \sigma^{\mu u} e_R F_{\mu u}$	$^{\mathrm{C}}$
CVLL_eetaue	$(ar{e}_L \gamma^\mu e_L)(\dot{ar{e}}_L \gamma_\mu  au_L)$	$^{\mathrm{C}}$
CVLL_muetaumu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{\mu}_L \gamma_\mu  au_L)$	$^{\mathrm{C}}$
CVLL_tauetautau	$(ar{e}_L \gamma^\mu  au_L) (ar{ au}_L \gamma_\mu  au_L)$	$^{\mathrm{C}}$
CVLL_taueuu	$(ar{e}_L \gamma^\mu  au_L) (ar{u}_L \gamma_\mu u_L)$	$\mathbf{C}$
CVLL_tauecc	$(ar{e}_L \gamma^\mu  au_L) (ar{c}_L \gamma_\mu c_L)$	$\mathbf{C}$
CVLL_tauedd	$(ar{e}_L \gamma^\mu  au_L) (ar{d}_L \gamma_\mu d_L)$	$^{\mathrm{C}}$
CVLL_tauess	$(ar{e}_L \gamma^\mu  au_L) (ar{s}_L \gamma_\mu s_L)$	$\mathbf{C}$
CVLL_tauebb	$(ar{e}_L \gamma^\mu  au_L) (ar{b}_L \gamma_\mu b_L)$	$^{\mathrm{C}}$
CVRR_eetaue	$(ar{e}_R \gamma^\mu e_R) (ar{e}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVRR_muetaumu	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{\mu}_R \gamma_\mu \tau_R)$	$\mathbf{C}$
CVRR_tauetautau	$(ar{e}_R \gamma^\mu  au_R) (ar{ au}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVRR_taueuu	$(\bar{e}_R \gamma^\mu \tau_R)(\bar{u}_R \gamma_\mu u_R)$	$\mathbf{C}$
CVRR_tauecc	$(ar{e}_R \gamma^\mu  au_R) (ar{c}_R \gamma_\mu c_R)$	$\mathbf{C}$
CVRR_tauedd	$(ar{e}_R \gamma^\mu  au_R) (ar{d}_R \gamma_\mu d_R)$	$^{\mathrm{C}}$
CVRR_tauess	$(ar{e}_R \gamma^\mu  au_R) (ar{s}_R \gamma_\mu s_R)$	$\mathbf{C}$
CVRR_tauebb	$(\bar{e}_R \gamma^\mu  au_R)(\bar{b}_R \gamma_\mu b_R)$	$^{\mathrm{C}}$

WC name	Operator	Type
CVLR_eetaue	$(\bar{e}_L \gamma^\mu e_L)(\bar{e}_R \gamma_\mu \tau_R)$	C
CVLR_muetaumu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{\mu}_R \gamma_\mu \tau_R)$	$\mathbf{C}$
CVLR_taueee	$(ar{e}_L \gamma^\mu  au_L) (ar{e}_R \gamma_\mu e_R)$	$\mathbf{C}$
CVLR_tauemumu	$(ar{e}_L \gamma^\mu  au_L) (ar{\mu}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVLR_tauetautau	$(ar{e}_L \gamma^\mu  au_L) (ar{ au}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_mumutaue	$(ar{\mu}_L \gamma^\mu \mu_L) (ar{e}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_taumumue	$(\bar{\mu}_L \gamma^\mu  au_L)(\bar{e}_R \gamma_\mu \mu_R)$	$\mathbf{C}$
CVLR_tautautaue	$(ar au_L\gamma^\mu au_L)(ar e_R\gamma_\mu au_R)$	$\mathbf{C}$
CVLR_taueuu	$(\bar{e}_L \gamma^\mu  au_L)(\bar{u}_R \gamma_\mu u_R)$	C
CVLR_tauecc	$(ar{e}_L \gamma^\mu  au_L) (ar{c}_R \gamma_\mu c_R)$	$\mathbf{C}$
CVLR_tauedd	$(ar{e}_L \gamma^\mu  au_L) (ar{d}_R \gamma_\mu d_R)$	$\mathbf{C}$
CVLR_tauess	$(ar{e}_L \gamma^\mu  au_L) (ar{s}_R \gamma_\mu s_R)$	$\mathbf{C}$
CVLR_tauebb	$(ar{e}_L\gamma^\mu au_L)(ar{b}_R\gamma_\mu b_R)$	$^{\mathrm{C}}$
CVLR_uutaue	$(ar{u}_L \gamma^\mu u_L) (ar{e}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_cctaue	$(\bar{c}_L \gamma^\mu c_L)(\bar{e}_R \gamma_\mu \tau_R)$	$^{\mathrm{C}}$
CVLR_ddtaue	$(ar{d}_L \gamma^\mu d_L) (ar{e}_R \gamma_\mu  au_R)$	$^{\mathrm{C}}$
CVLR_sstaue	$(ar{s}_L \gamma^\mu s_L) (ar{e}_R \gamma_\mu  au_R)$	$^{\mathrm{C}}$
CVLR_bbtaue	$(ar{b}_L \gamma^\mu b_L) (ar{e}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CSRL_taueuu	$(ar{e}_L au_R)(ar{u}_Ru_L)$	$\mathbf{C}$
CSRL_tauecc	$(ar{e}_L au_R)(ar{c}_Rc_L)$	$\mathbf{C}$
CSRL_etauuu	$(ar{ au}_L e_R)(ar{u}_R u_L)$	$\mathbf{C}$
CSRL_etaucc	$(ar{ au}_L e_R)(ar{c}_R c_L)$	$^{\mathrm{C}}$
CSRL_tauedd	$(ar{e}_L au_R)(ar{d}_Rd_L)$	$\mathbf{C}$
CSRL_tauess	$(ar{e}_L au_R)(ar{s}_Rs_L)$	$\mathbf{C}$
CSRL_tauebb	$(ar{e}_L au_R)(ar{b}_Rb_L)$	$\mathbf{C}$
CSRL_etaudd	$(ar{ au}_L e_R)(ar{d}_R d_L)$	$\mathbf{C}$
CSRL_etauss	$(ar{ au}_L e_R)(ar{s}_R s_L)$	$\mathbf{C}$
CSRL_etaubb	$(ar{ au}_L e_R)(ar{b}_R b_L)$	$\mathbf{C}$
CSRR_eetaue	$(\bar{e}_L e_R)(\bar{e}_L  au_R)$	$\mathbf{C}$
CSRR_eeetau	$(\bar{e}_L e_R)(\bar{ au}_L e_R)$	$\mathbf{C}$
CSRR_muetaumu	$(ar{e}_L\mu_R)(ar{\mu}_L au_R)$	$\mathbf{C}$
CSRR_tauemumu	$(ar{e}_L au_R)(ar{\mu}_L\mu_R)$	$\mathbf{C}$
CSRR_tauetautau	$(ar{e}_L au_R)(ar{ au}_L au_R)$	$^{\mathrm{C}}$
CSRR_emumutau	$(ar{\mu}_L e_R)(ar{ au}_L \mu_R)$	$^{\mathrm{C}}$
CSRR_mumuetau	$(ar{\mu}_L \mu_R)(ar{ au}_L e_R)$	$^{\mathrm{C}}$
CSRR_etautautau	$(ar{ au}_L e_R)(ar{ au}_L  au_R)$	$^{\mathrm{C}}$
CSRR_taueuu	$(ar{e}_L au_R)(ar{u}_Lu_R)$	$^{\mathrm{C}}$
CSRR_tauecc	$(ar{e}_L au_R)(ar{c}_Lc_R)$	$^{\mathrm{C}}$
CSRR_etauuu	$(ar{ au}_L e_R)(ar{u}_L u_R)$	$^{\mathrm{C}}$
CSRR_etaucc	$(ar{ au}_L e_R)(ar{c}_L c_R)$	$^{\mathrm{C}}$
CTRR_taueuu	$(ar{e}_L\sigma^{\mu u} au_R)(ar{u}_L\sigma_{\mu u}u_R)$	$^{\mathrm{C}}$
CTRR_tauecc	$(ar{e}_L\sigma^{\mu u} au_R)(ar{c}_L\sigma_{\mu u}c_R)$	C
CTRR_etauuu	$(\bar{ au}_L \sigma^{\mu u} e_R)(\bar{u}_L \sigma_{\mu u} u_R)$	$^{\mathrm{C}}$
CTRR_etaucc	$(\bar{ au}_L \sigma^{\mu  u} e_R) (\bar{c}_L \sigma_{\mu  u} c_R)$	$^{\mathrm{C}}$

WC name	Operator	Type
CSRR_tauedd	$(ar{e}_L au_R)(ar{d}_Ld_R)$	C
CSRR_tauess	$(ar{e}_L au_R)(ar{s}_Ls_R)$	$^{\mathrm{C}}$
CSRR_tauebb	$(ar{e}_L au_R)(ar{b}_Lb_R)$	C
CSRR_etaudd	$(ar{ au}_L e_R)(ar{d}_L d_R)$	$^{\mathrm{C}}$
CSRR_etauss	$(ar{ au}_L e_R)(ar{s}_L s_R)$	$\mathbf{C}$
CSRR_etaubb	$(ar{ au}_L e_R)(ar{b}_L b_R)$	$\mathbf{C}$
CTRR_tauedd	$(ar{e}_L\sigma^{\mu u} au_R)(ar{d}_L\sigma_{\mu u}d_R)$	$\mathbf{C}$
CTRR_tauess	$(ar{e}_L\sigma^{\mu u} au_R)(ar{s}_L\sigma_{\mu u}s_R)$	$\mathbf{C}$
CTRR_tauebb	$(ar{e}_L\sigma^{\mu u} au_R)(ar{b}_L\sigma_{\mu u}b_R)$	$\mathbf{C}$
CTRR_etaudd	$(ar au_L\sigma^{\mu u}e_R)(ar d_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
CTRR_etauss	$(ar{ au}_L\sigma^{\mu u}e_R)(ar{s}_L\sigma_{\mu u}s_R)$	$^{\mathrm{C}}$
CTRR_etaubb	$(ar{ au}_L\sigma^{\mu u}e_R)(ar{b}_L\sigma_{\mu u}b_R)$	$^{\mathrm{C}}$

### ${\tt nunumue}$

WC name	Operator	Type
CVLL_nuenuemue	$(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{e}_{L}\gamma_{\mu}\mu_{L})$	C
CVLL_numunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{\mu}_{L}\gamma_{\mu}e_{L})$	$\mathbf{C}$
CVLL_numunuemue	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{e}_{L}\gamma_{\mu}\mu_{L})$	C
CVLL_numunumumue	$(\bar{ u}_{\mu L} \gamma^{\mu} \overline{ u}_{\mu L}) (\bar{e}_L \gamma_{\mu} \mu_L)$	$^{\mathrm{C}}$
CVLL_nutaunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{ au L})(\bar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_nutaunuemue	$(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{e}_{L}\gamma_{\mu}\mu_{L})$	$\mathbf{C}$
CVLL_nutaunumuem	u $(ar{ u}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{\mu}_{L} \gamma_{\mu} e_{L})$	$\mathbf{C}$
CVLL_nutaunumumu	e $(ar{ u}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{e}_L \gamma_{\mu} \mu_L)$	$\mathbf{C}$
CVLL_nutaunutaum	ue $(ar{ u}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{e}_{L} \gamma_{\mu} \mu_{L})$	$\mathbf{C}$
CVLR_nuenuemue	$(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{e}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$
CVLR_numunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{\mu}_{R}\gamma_{\mu}e_{R})$	$^{\mathrm{C}}$
CVLR_numunuemue	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{e}_R\gamma_{\mu}\mu_R)$	$^{\mathrm{C}}$
CVLR_numunumumue	$(ar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (ar{e}_R \gamma_{\mu} \mu_R)$	$\mathbf{C}$
CVLR_nutaunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{ au L})(\bar{\mu}_{R}\gamma_{\mu}e_{R})$	$\mathbf{C}$
CVLR_nutaunuemue	$(\bar{ u}_{eL}\gamma^{\mu} u_{ au L})(\bar{e}_{R}\gamma_{\mu}\mu_{R})$	$\mathbf{C}$
CVLR_nutaunumuem	u $(ar{ u}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{\mu}_R \gamma_{\mu} e_R)$	$\mathbf{C}$
CVLR_nutaunumumu	e $(ar{ u}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{e}_R \gamma_{\mu} \mu_R)$	$\mathbf{C}$
CVLR_nutaunutaum	${\sf u}$ e $(ar{ u}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{e}_R \gamma_{\mu} \mu_R)$	$\mathbf{C}$

### nunumutau

WC name	Operator	Type
CVLL_nuenuetaumu	$(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{\mu}_{L}\gamma_{\mu} au_{L})$	C
CVLL_numunuemuta	$1  (ar{ u}_{eL} \gamma^\mu  u_{\mu L}) (ar{ au}_L \gamma_\mu \mu_L)$	$\mathbf{C}$

WC name	Operator	Type
CVLL_numunueta	umu $(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{\mu}_{L}\gamma_{\mu} au_{L})$	С
CVLL_numunumuta	$ au$ mu $(ar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (ar{\mu}_{L} \gamma_{\mu}  au_{L})$	$^{\mathrm{C}}$
CVLL_nutaunuem	utau $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{ au}_{L}\gamma_{\mu}\mu_{L})$	$^{\mathrm{C}}$
CVLL_nutaunueta	$ au$ mu $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{\mu}_{L}\gamma_{\mu} au_{L})$	$^{\mathrm{C}}$
CVLL_nutaunumum	nuta $ar{m{v}}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{ au}_L \gamma_{\mu} \mu_L)$	$^{\mathrm{C}}$
CVLL_nutaunumut	au =  au =  au =  au =  au =  au =  au	$^{\mathrm{C}}$
CVLL_nutaunutau	utau $ar{m}_{L}\gamma^{\mu} u_{ au L})(ar{\mu}_{L}\gamma_{\mu} au_{L})$	$^{\mathrm{C}}$
CVLR_nuenuetaum	nu $(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{\mu}_{R}\gamma_{\mu} au_{R})$	$^{\mathrm{C}}$
CVLR_numunuemut	tau $(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{ au}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$
CVLR_numunueta	umu $(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{\mu}_{R}\gamma_{\mu} au_{R})$	$^{\mathrm{C}}$
CVLR_numunumuta	$ au$ mu $(ar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (ar{\mu}_R \gamma_{\mu}  au_R)$	$^{\mathrm{C}}$
CVLR_nutaunuem	utau $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{ au}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$
CVLR_nutaunueta	$ au$ mu $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{\mu}_{R}\gamma_{\mu} au_{R})$	$^{\mathrm{C}}$
	$ ext{nuta}(ar{m{v}}_{\mu L}\gamma^{\mu} u_{ au L})(ar{ au}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$
	$ au = (ar{m{u}}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{\mu}_R \gamma_{\mu}  au_R)$	$^{\mathrm{C}}$
	ιτα $(ar{m}_{\!$	$^{\mathrm{C}}$

## nunutaue

WC name	Operator	Type
CVLL_nuenuetaue	$(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{e}_{L}\gamma_{\mu} au_{L})$	С
CVLL_numunueetau	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{ au}_{L}\gamma_{\mu}e_{L})$	$\mathbf{C}$
CVLL_numunuetaue	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{e}_{L}\gamma_{\mu} au_{L})$	$\mathbf{C}$
CVLL_numunumutaue	e $(ar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (ar{e}_L \gamma_{\mu}  au_L)$	$\mathbf{C}$
CVLL_nutaunueeta	u $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{ au}_{L}\gamma_{\mu}e_{L})$	$\mathbf{C}$
CVLL_nutaunuetaue	e $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{e}_{L}\gamma_{\mu} au_{L})$	$\mathbf{C}$
CVLL_nutaunumueta	au $(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{ au}_{L}\gamma_{\mu}e_{L})$	$\mathbf{C}$
CVLL_nutaunumuta	$\mathbf{u}$ e $ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{e}_{L}\gamma_{\mu} au_{L})$	$\mathbf{C}$
CVLL_nutaunutauta	au $(ar{m{e}}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{e}_{L} \gamma_{\mu}  au_{L})$	$\mathbf{C}$
CVLR_nuenuetaue	$(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{e}_R\gamma_{\mu} au_R)$	$\mathbf{C}$
CVLR_numunueetau	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{ au}_{R}\gamma_{\mu}e_{R})$	$\mathbf{C}$
CVLR_numunuetaue	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{e}_{R}\gamma_{\mu} au_{R})$	$\mathbf{C}$
CVLR_numunumutaue	e $(ar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (ar{e}_R \gamma_{\mu}  au_R)$	$\mathbf{C}$
CVLR_nutaunueeta	$\mathrm{u}\left(ar{ u}_{eL}\gamma^{\mu} u_{ au L} ight)(ar{ au}_{R}\gamma_{\mu}e_{R})$	$\mathbf{C}$
CVLR_nutaunuetaue	e $(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{e}_{R}\gamma_{\mu} au_{R})$	$\mathbf{C}$
CVLR_nutaunumueta	$\Delta u (ar{ u}_{\mu L} \gamma^{\mu}  u_{ au L}) (ar{ au}_R \gamma_{\mu} e_R)$	$\mathbf{C}$
	$\mathbf{u}$ e $(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{e}_{R}\gamma_{\mu} au_{R})$	$\mathbf{C}$
CVLR_nutaunutauta	au $m{ar{e}}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{e}_R \gamma_{\mu}  au_R)$	С

# ffnunu

WC name	Operator	Type
CVLL_nuenuebb	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{b}_L\gamma_{\mu}b_L)$	R
CVLL_nuenuecc	$rac{4\ddot{G}_{F}^{2}}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{c}_{L}\gamma_{\mu}c_{L})$	$\mathbf{R}$
CVLL_nuenuedd	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{d}_L\gamma_\mu d_L)$	$\mathbf{R}$
CVLL_nuenueee	$\frac{4Q_F^2}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{eL})(\bar{e}_L\gamma_\mu e_L)$	$\mathbf{R}$
CVLL_nuenuemumu	$\frac{4\overset{Q}{G_F}}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{\mu}_{L}\gamma_{\mu}\mu_{L})$	${ m R}$
CVLL_nuenuess	$rac{4  ilde{\mathrm{G}_F}}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{eL}) (ar{s}_L \gamma_\mu s_L)$	R
CVLL_nuenuetautau	$1 rac{4 \overset{C}{G_F}}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{eL}) (ar{ au}_L \gamma_\mu  au_L)$	${ m R}$
CVLL_nuenueuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{u}_L\gamma_{\mu}u_L)$	R
CVLL_nuenumubb	$rac{4 \widetilde{G_F}}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{\mu L}) (ar{b}_L \gamma_\mu b_L)$	$^{\mathrm{C}}$
CVLL_nuenumucc	$rac{4 \overset{\sim}{G_F}}{\sqrt{2}} (ar{ u}_{eL} \gamma^{\mu}  u_{\mu L}) (ar{c}_L \gamma_{\mu} c_L)$	$^{\mathrm{C}}$
CVLL_nuenumudd	$rac{4 \widetilde{G}_F}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{\mu L}) (ar{d}_L \gamma_\mu d_L)$	$\mathbf{C}$
CVLL_nuenumuee	$\frac{4 \check{G}_F}{\sqrt{2}} (\bar{ u}_{eL} \gamma^\mu  u_{\mu L}) (\bar{e}_L \gamma_\mu e_L)$	$\mathbf{C}$
CVLL_nuenumumumu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{\mu L})(\bar{\mu}_L\gamma_\mu\mu_L)$	$^{\mathrm{C}}$
CVLL_nuenumuss	$rac{4 \check{G}_F}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{\mu L}) (ar{s}_L \gamma_\mu s_L)$	$\mathbf{C}$
CVLL_nuenumutauta	$\sin^{4\!$	$\mathbf{C}$
CVLL_nuenumuuu	$\frac{4 \check{G}_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L)$	$\mathbf{C}$
CVLL_nuenutaubb	$rac{4 {ar G_F}}{\sqrt{2}} (ar  u_{eL} \gamma^\mu  u_{ au L}) (ar b_L \gamma_\mu b_L)$	$\mathbf{C}$
CVLL_nuenutaucc	$rac{4 {ar G_F}}{\sqrt{2}} (ar  u_{eL} \gamma^\mu  u_{ au L}) (ar c_L \gamma_\mu c_L)$	$\mathbf{C}$
CVLL_nuenutaudd	$rac{4 G_F}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{ au L}) (ar{d}_L \gamma_\mu d_L)$	$\mathbf{C}$
CVLL_nuenutauee	$rac{4 \overleftarrow{G_F}}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{ au L}) (ar{e}_L \gamma_\mu e_L)$	$\mathbf{C}$
CVLL_nuenutaumumu	$1 \frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{ u}_{eL} \gamma^\mu  u_{\tau L}) (\bar{\mu}_L \gamma_\mu \mu_L)$	$\mathbf{C}$
CVLL_nuenutauss	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu} u_{\tau L})(\bar{s}_L\gamma_{\mu}s_L)$	$\mathbf{C}$
CVLL_nuenutautaut	$A_{\sqrt{2}}^{4\widetilde{G_F}}(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{ au}_{L}\gamma_{\mu} au_{L})$	$\mathbf{C}$
CVLL_nuenutauuu	$\frac{4 \check{\mathbf{G}}_F^c}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L)$	$\mathbf{C}$
CVLL_numunumubb	$rac{4  ilde{\mathrm{G}_F}}{\sqrt{2}} (ar{ u}_{\mu L} \gamma^\mu  u_{\mu L}) (ar{b}_L \gamma_\mu b_L)$	${ m R}$
CVLL_numunumucc	$\frac{4\check{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{c}_L\gamma_\mu c_L)$	R
${\tt CVLL\_numunumudd}$	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{d}_L\gamma_\mu d_L)$	${ m R}$
CVLL_numunumuee	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L)$	${ m R}$
CVLL_numunumumumumumumumumumumumumumumumumum	$1 rac{4 ar{G_F}}{\sqrt{2}} (ar{ u}_{\mu L} \gamma^\mu  u_{\mu L}) (ar{\mu}_L \gamma_\mu \mu_L)$	R
CVLL_numunumuss	$rac{4\ddot{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{s}_L\gamma_\mu s_L)$	${ m R}$
CVLL_numunumutaut	$\Xi_{\sqrt{2}}^{4\widetilde{G_F}}(ar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(ar{ au}_L\gamma_{\mu} au_L)$	${ m R}$
CVLL_numunumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_L\gamma_{\mu}u_L)$	${ m R}$
${\tt CVLL\_numunutaubb}$	$rac{4 \check{G}_F}{\sqrt{2}} (ar{ u}_{\mu L} \gamma^\mu  u_{ au L}) (ar{b}_L \gamma_\mu b_L)$	$\mathbf{C}$
CVLL_numunutaucc	$\frac{4G_F}{\sqrt{c}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{c}_L\gamma_{\mu}c_L)$	$^{\mathrm{C}}$
CVLL_numunutaudd	$\frac{4\ddot{G_F}}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{d}_L\gamma_{\mu}d_L)$	$^{\mathrm{C}}$
CVLL_numunutauee	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L)$ $\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L)$	$^{\mathrm{C}}$
CVLL_numunutaumun	$\sin^4\!\!rac{ar{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{\mu}_L\gamma_\mu\mu_L)$	$\mathbf{C}$

WC name	Operator	Type
CVLL_numunutauss	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L)$	C
CVLL_numunutautau	$14\frac{\chi_{TL}^{\gamma}}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{ au}_{L}\gamma_{\mu} au_{L})$	$\mathbf{C}$
CVLL_numunutauuu	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
CVLL_nutaunutaub	$\sim rac{4G_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{b}_L\gamma_\mu b_L)$	R
	$\simeq rac{4G_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{c}_L\gamma_\mu c_L)$	R
	$rac{4reve{G}_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{d}_L\gamma_{\mu}d_L)$	R
CVLL_nutaunutaue	$=rac{4\widetilde{G_F}}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{e}_L\gamma_{\mu}e_L)$	R
_	$\lim_{\sqrt{2}}^{4G_F} (ar{ u}_{ au L} \gamma^\mu  u_{ au L}) (ar{\mu}_L \gamma_\mu \mu_L)$	R
CVLL_nutaunutauss	$=rac{4G_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{s}_L\gamma_\mu s_L)$	R
	$\mathrm{au}_{\sqrt{2}}^{4G}\mathrm{u}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{ au}_{L}\gamma_{\mu} au_{L})$	R
CVLL_nutaunutauuu	$1 \frac{4G_F}{\sqrt{2}} (\bar{ u}_{ au L} \gamma^\mu  u_{ au L}) (\bar{u}_L \gamma_\mu u_L)$	R
CVLR_nuenuebb	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{b}_R\gamma_{\mu}b_R)$	R
CVLR_nuenuecc	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{c}_R\gamma_\mu c_R)$	R
CVLR_nuenuedd	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{d}_R\gamma_\mu d_R)$	R
CVLR_nuenueee	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{e}_R\gamma_\mu e_R)$	R
CVLR_nuenuemumu	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{\mu}_R\gamma_{\mu}\mu_R)$	R
CVLR_nuenuess	$rac{4\dot{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{s}_R\gamma_\mu s_R)$	R
CVLR_nuenuetautau		R
CVLR_nuenueuu	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{eL})(ar{u}_R\gamma_{\mu}u_R)$	R
CVLR_nuenumubb	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
CVLR_nuenumucc	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{c}_R\gamma_\mu c_R)$	$\mathbf{C}$
CVLR_nuenumudd	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{d}_R\gamma_\mu d_R)$	$\mathbf{C}$
CVLR_nuenumuee	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{e}_R\gamma_{\mu}e_R)$	$\mathbf{C}$
CVLR_nuenumumumu	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{\mu}_R\gamma_\mu\mu_R)$	$\mathbf{C}$
CVLR_nuenumuss	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CVLR_nuenumutauta	$\sin^4\!\!rac{dG_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{ au}_R\gamma_\mu au_R)$	$\mathbf{C}$
CVLR_nuenumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{u}_R\gamma_{\mu}u_R)$	$\mathbf{C}$
CVLR_nuenutaubb	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{ au L})(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
CVLR_nuenutaucc	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{ au L})(ar{c}_R\gamma_\mu c_R)$	$\mathbf{C}$
CVLR_nuenutaudd	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{d}_R\gamma_{\mu}d_R)$	$\mathbf{C}$
CVLR_nuenutauee	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_R\gamma_{\mu}e_R)$	$\mathbf{C}$
CVLR_nuenutaumumu	$1 \frac{4\widetilde{G_F}}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_R \gamma_{\mu} \mu_R)$	$\mathbf{C}$
CVLR_nuenutauss	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{ au L})(ar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CVLR_nuenutautaut	$\pm rac{A\dot{G}_F}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu  u_{ au L}) (ar{ au}_R \gamma_\mu  au_R)$	$\mathbf{C}$
CVLR_nuenutauuu	$rac{4\widetilde{G_F}}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{u}_R\gamma_{\mu}u_R)$	$\mathbf{C}$
CVLR_numunumubb	$rac{4reve{G_F}}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(ar{b}_R\gamma_{\mu}b_R)$	R
CVLR_numunumucc	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{c}_R\gamma_{\mu}c_R)$	R

WC name	Operator	Type
CVLR_numunumudd	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{d}_R\gamma_{\mu}d_R)$	R
CVLR_numunumuee	$\frac{4\check{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{e}_R\gamma_\mu e_R)$	R
CVLR_numunumumumumumumumumumumumumumumumumum	$1  rac{4 ar{G_F}}{\sqrt{2}} (ar{ u}_{\mu L} \gamma^\mu  u_{\mu L}) (ar{\mu}_R \gamma_\mu \mu_R)$	R
CVLR_numunumuss	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{s}_R\gamma_\mu s_R)$	R
CVLR_numunumutaut	$\Xi_{\sqrt{2}}^{4G_F}(ar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(ar{ au}_R\gamma_{\mu} au_R)$	R
CVLR_numunumuuu	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_R\gamma_{\mu}u_R)$	R
${\tt CVLR\_numunutaubb}$	$rac{4\dot{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{b}_R\gamma_\mu b_R)$	$\mathbf{C}$
${\tt CVLR\_numunutaucc}$	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{c}_R\gamma_{\mu}c_R)$	$\mathbf{C}$
${\tt CVLR\_numunutaudd}$	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{d}_R\gamma_{\mu}d_R)$	$\mathbf{C}$
${\tt CVLR\_numunutauee}$	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{e}_R\gamma_{\mu}e_R)$	$\mathbf{C}$
CVLR_numunutaumum	$\sinrac{4G_F}{\sqrt{2}}(ar u_{\mu L}\gamma^\mu u_{ au L})(ar\mu_R\gamma_\mu\mu_R)$	$\mathbf{C}$
${\tt CVLR\_numunutauss}$	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_R\gamma_{\mu}s_R)$	$\mathbf{C}$
CVLR_numunutautau	it $\frac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{ au}_R\gamma_\mu au_R)$	$\mathbf{C}$
${\tt CVLR\_numunutauuu}$	$\sqrt{2}$	$\mathbf{C}$
CVLR_nutaunutaubb	$ au rac{4 \dot{G}_F}{\sqrt{2}} (ar{ u}_{ au L} \gamma^\mu  u_{ au L}) (ar{b}_R \gamma_\mu b_R)$	R
CVLR_nutaunutauco	$pprox rac{4\dot{G}_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{c}_R\gamma_{\mu}c_R)$	R
CVLR_nutaunutaudo	$rac{4\dot{G}_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{d}_R\gamma_\mu d_R)$	R
CVLR_nutaunutaue	$=rac{4G_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{e}_R\gamma_\mu e_R)$	R
CVLR_nutaunutaumu	$\lim_{\sqrt{2}} (ar{ u}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{\mu}_R \gamma_{\mu} \mu_R)$	R
CVLR_nutaunutauss	$=rac{4G_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{s}_R\gamma_\mu s_R)$	R
CVLR_nutaunutauta	$\frac{\sqrt{C_L}}{\sqrt{2}} (ar{ u}_{ au L} \gamma^\mu  u_{ au L}) (ar{ au}_R \gamma_\mu  au_R)$	R
CVLR_nutaunutauuu	$1 \frac{4\widetilde{G}_F}{\sqrt{2}} (\bar{\nu}_{\tau L} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_R \gamma_{\mu} u_R)$	R