Basis flavio (EFT WET-3)

Sectors

The effective Lagrangian is defined as

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

sdsd

WC name	Operator	Type
CVLL_sdsd	$(\bar{d}_L \gamma^\mu s_L)(\bar{d}_L \gamma_\mu s_L)$	С
CVRR_sdsd	$(\bar{d}_R \gamma^\mu s_R)(\bar{d}_R \gamma_\mu s_R)$	\mathbf{C}
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	$(ar{d}_R s_L)(ar{d}_L s_R)$	\mathbf{C}

sd

WC name	Operator	Type
C9_sdee	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_L\gamma^{\mu}s_L)(\bar{e}\gamma_{\mu}e)$	\mathbf{C}
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	$rac{4 ilde{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 e)$	\mathbf{C}
C10p_sdee	$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{e}\gamma_{\mu}\gamma_{5}e)$	\mathbf{C}
CS_sdee	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_L s_R)(\bar{e}e)$	\mathbf{C}
CSp_sdee	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_Rs_L)(\bar{e}e)$	\mathbf{C}
CP_sdee	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_L s_R)(\bar{e}\gamma_5 e)$	\mathbf{C}
CPp_sdee	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}m_s(ar{d}_R s_L)(ar{e}\gamma_5 e)$	\mathbf{C}
C9_sdmumu	$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}\mu)$	\mathbf{C}
C9p_sdmumu	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}(\bar{d}_R\gamma^{\mu}s_R)(\bar{\mu}\gamma_{\mu}\mu)$	\mathbf{C}
C10_sdmumu	$rac{4 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 \mu)$	\mathbf{C}
C10p_sdmumu	$rac{4ar{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}\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}

WC name	Operator	Type
CSp_sdmumu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_Rs_L)(\bar{\mu}\mu)$	\mathbf{C}
CP_sdmumu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_L s_R)(\bar{\mu}\gamma_5\mu)$	$^{\mathrm{C}}$
CPp_sdmumu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*rac{e^2}{16\pi^2}m_s(\bar{d}_Rs_L)(\bar{\mu}\gamma_5\mu)$	\mathbf{C}
C7_sd	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e}{16\pi^{2}}m_{s}(\bar{d}_{L}\sigma^{\mu\nu}s_{R})F_{\mu\nu}$	\mathbf{C}
C7p_sd	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e}{16\pi^2}m_s(\bar{d}_R\sigma^{\mu\nu}s_L)F_{\mu\nu}$	$^{\mathrm{C}}$
C8_sd	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{g_s}{16\pi^2}m_s(\bar{d}_L\sigma^{\mu\nu}T^as_R)G_{\mu\nu}^a$	$^{\mathrm{C}}$
C8p_sd	$\frac{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{g_s}{16\pi^2}m_s(\bar{d}_R\sigma^{\mu\nu}T^as_L)G_{\mu\nu}^a}{\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\gamma^{\mu}s_L)(\bar{s}_L\gamma_{\mu}s_L)}$	$^{\mathrm{C}}$
CVLL_sdss	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{s}_L\gamma_\mu s_L)$	$^{\mathrm{C}}$
CVLR_sdss	$\frac{4G_F}{\overline{S}}V_{ts}V_{ts}^*(\bar{d}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}s_R)$	\mathbf{C}
CVRL_sdss	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{s}_L\gamma_\mu s_L)$	\mathbf{C}
CVRR_sdss	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^{\mu}s_R)(ar{s}_L\gamma_{\mu}s_L) \ rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^{\mu}s_R)(ar{s}_R\gamma_{\mu}s_R)$	\mathbf{C}
CSLL_sdss	$rac{4ar{G_F}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{s}_Rs_L) \ rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{s}_Ls_R) \ rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{s}_Ls_R)$	\mathbf{C}
CSLR_sdss	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{s}_Ls_R)$	\mathbf{C}
CSRL_sdss	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(d_Ls_R)(\bar{s}_Rs_L)$	\mathbf{C}
CSRR_sdss	$\frac{\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}(\bar{d}_{L}s_{R})(\bar{s}_{L}s_{R})}{\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}(\bar{d}_{R}\sigma^{\mu\nu}s_{L})(\bar{s}_{R}\sigma_{\mu\nu}s_{L})}$	\mathbf{C}
CTLL_sdss	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\sigma^{\mu u}s_L)(ar{s}_R\sigma_{\mu u}s_L)$	\mathbf{C}
CTRR_sdss	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\sigma^{\mu u}s_R)(ar{s}_L\sigma_{\mu u}s_R)$	\mathbf{C}
CVLL_sddd	$rac{4ar{G}_F^c}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{d}_L\gamma_\mu d_L)$	\mathbf{C}
CVLR_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{d}_R\gamma_\mu d_R)$	\mathbf{C}
CVRL_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{d}_L\gamma_\mu d_L)$	$^{\mathrm{C}}$
CVRR_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{d}_R\gamma_\mu d_R)$	$^{\mathrm{C}}$
CSLL_sddd	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(d_Rs_L)(d_Rd_L)$	\mathbf{C}
CSLR_sddd	$rac{4reve{G}_F^*}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Rs_L)(ar{d}_Ld_R)$	\mathbf{C}
CSRL_sddd	$rac{\sqrt{2}}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L s_R)(ar{d}_R d_L)$	\mathbf{C}
CSRR_sddd	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{d}_Ld_R)$	\mathbf{C}
CTLL_sddd	$rac{4ar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\sigma^{\mu u}s_L)(ar{d}_R\sigma_{\mu u}d_L)$	$^{\mathrm{C}}$
CTRR_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}
CVLL_sduu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L\gamma^\mu s_L)(ar{u}_L\gamma_\mu u_L)$	\mathbf{C}
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}
CVRL_sduu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R\gamma^\mu s_R)(ar{u}_L\gamma_\mu u_L)$	\mathbf{C}
CVRR_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^\mu s_R)(\bar{u}_R\gamma_\mu u_R)$	\mathbf{C}
CSLL_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Ru_L)$	\mathbf{C}
CSLR_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Lu_R)$	\mathbf{C}
CSRL_sduu	$rac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_Ls_R)(ar{u}_Ru_L)$	\mathbf{C}
CSRR_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L s_R)(\bar{u}_L u_R)$	\mathbf{C}
CTLL_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^{\mu}s_R)(\bar{u}_L\gamma_{\mu}u_L)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\gamma^{\mu}s_R)(\bar{u}_R\gamma_{\mu}u_R)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Ru_L)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Rs_L)(\bar{u}_Lu_R)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Lu_R)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Ru_L)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_Ls_R)(\bar{u}_Lu_R)$ $\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R\sigma^{\mu\nu}s_L)(\bar{u}_R\sigma_{\mu\nu}u_L)$	\mathbf{C}

WC name	Operator	Type
CTRR_sduu	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L\sigma^{\mu\nu}s_R)(\bar{u}_L\sigma_{\mu\nu}u_R)$	С
CVLLt_sduu	$rac{4 \overset{\circ}{G_F}}{\sqrt{2}} V_{ts} V_{td}^* (ar{d}_L^lpha \gamma^\mu s_L^eta) (ar{u}_L^eta \gamma_\mu u_L^lpha)$	\mathbf{C}
CVLRt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha\gamma^\mu s_L^eta)(ar{u}_R^eta\gamma_\mu u_R^lpha)$	\mathbf{C}
CVRLt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\gamma^\mu s_R^eta)(ar{u}_L^eta\gamma_\mu u_L^lpha)$	\mathbf{C}
CVRRt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\gamma^\mu s_R^eta)(ar{u}_R^eta\gamma_\mu u_R^lpha)$	\mathbf{C}
CSLLt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{u}_R^eta u_L^lpha)$	\mathbf{C}
CSLRt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha s_L^eta)(ar{u}_L^eta u_R^lpha)$	\mathbf{C}
CSRLt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_L^lpha s_R^eta)(ar{u}_R^eta u_L^lpha)$	\mathbf{C}
CSRRt_sduu	$rac{4 \dot{G}_F}{\sqrt{2}} V_{ts} V_{td}^* (ar{d}_L^lpha s_R^eta) (ar{u}_L^eta u_R^lpha)$	\mathbf{C}
CTLLt_sduu	$rac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(ar{d}_R^lpha\sigma^{\mu u}s_L^eta)(ar{u}_R^eta\sigma_{\mu u}u_L^lpha)$	\mathbf{C}
CTRRt_sduu	$\frac{4\bar{G}_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_L^\alpha\sigma^{\mu\nu}s_R^\beta)(\bar{u}_L^\beta\sigma_{\mu\nu}u_R^\alpha)$	С

sdnunu

WC name	Operator	Type
CL_sdnuenue	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} d_L) (\bar{\nu}_e \gamma_{\mu} (1 - \gamma_5) \nu_e)$	C
${\tt CL_sdnumunumu}$	$rac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*rac{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	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	\mathbf{C}
CL_sdnumunue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	\mathbf{C}
CL_sdnumunutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	\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	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	\mathbf{C}
CR_sdnumunue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_e\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	\mathbf{C}
CR_sdnumunutau	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	\mathbf{C}
CR_sdnutaunumu	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_{\tau})$	\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	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^{\mu} d_R) (\bar{\nu}_e \gamma_{\mu} (1 - \gamma_5) \nu_{\tau})$	\mathbf{C}

sdemu

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

sdmue

WC name	Operator	Type
C9_sdmue	$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}\mu)$	С
C9p_sdmue	$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\mu)$	\mathbf{C}
C10_sdmue	$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{e}\gamma_\mu\gamma_5\mu)$	\mathbf{C}
C10p_sdmue	$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\gamma_5\mu)$	\mathbf{C}
CS_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_L s_R)(\bar{e}\mu)$	\mathbf{C}
CSp_sdmue	$\frac{4\dot{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_R s_L)(\bar{e}\mu)$	\mathbf{C}
CP_sdmue	$\frac{4\dot{G}_{F}}{\sqrt{2}}V_{ts}V_{td}^{*}\frac{e^{2}}{16\pi^{2}}m_{s}(\bar{d}_{L}s_{R})(\bar{e}\gamma_{5}\mu)$	\mathbf{C}
CPp_sdmue	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e^2}{16\pi^2}m_s(\bar{d}_R s_L)(\bar{e}\gamma_5\mu)$	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	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{eL})$	\mathbf{C}
CSR_suenue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R u_{eL})$	\mathbf{C}
CSL_suenue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R \nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{e}_R \nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R \sigma^{\mu\nu} s_L)(\bar{e}_R \sigma_{\mu\nu} \nu_{eL})$	\mathbf{C}
CT_suenue	$-rac{4ar{G_F}}{\sqrt{2}}V_{us}(ar{u}_R\sigma^{\mu u}s_L)(ar{e}_R\sigma_{\mu u} u_{eL})$	\mathbf{C}
CVL_suenumu	$-\frac{4\overleftarrow{G_F}}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^{\mu}s_L)(\bar{e}_L\gamma_{\mu}\nu_{\mu L}) -\frac{4\overleftarrow{G_F}}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^{\mu}s_R)(\bar{e}_L\gamma_{\mu}\nu_{\mu L})$	\mathbf{C}
CVR_suenumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{\mu L})$	\mathbf{C}
CSR_suenumu	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{us}(ar{u}_Ls_R)(ar{e}_R u_{\mu L})$	C

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

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

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WC name	Operator	Type
CVL_duenue	$-rac{4G_F}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{eL})$	C
CVR_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{e}_L\gamma_\mu\nu_{eL}) -\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{e}_L\gamma_\mu\nu_{eL})$	$^{\mathrm{C}}$
CSR_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CSL_duenue	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_duenue	$-\frac{4G_F^2}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{e}_R \nu_{eL}) \\ -\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R \sigma^{\mu\nu} d_L)(\bar{e}_R \sigma_{\mu\nu} \nu_{eL})$	C

WC name	Operator	Type
CVL_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{e}_L\gamma_\mu\nu_{\mu L})$	\overline{C}
CVR_duenumu	$-rac{4G_F^2}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{e}_L\gamma_\mu u_{\mu L})$	\mathbf{C}
CSR_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{e}_R\nu_{\mu L})$	\mathbf{C}
CSL_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R u_{\mu L})$	\mathbf{C}
CT_duenumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{e}_R\sigma_{\mu u} u_{\mu L})$	\mathbf{C}
CVL_duenutau	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{ au L})$	\mathbf{C}
CVR_duenutau	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{e}_L\gamma_\mu u_{ au L})$	\mathbf{C}
CSR_duenutau	$-\frac{4\check{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{e}_R u_{\tau L})$	\mathbf{C}
CSL_duenutau	$-\frac{4\overset{\leftarrow}{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R\nu_{\tau L})$	\mathbf{C}
CT_duenutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

${\tt udmunu}$

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

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WC name	Operator	Type
CG	$\frac{4G_F}{\sqrt{2}}f^{ABC}G^{A\nu}_{\mu}G^{B\rho}_{\nu}G^{C\mu}_{\rho}$	R
CGtilde	$rac{4\overset{.}{G_F}}{\sqrt{2}}f^{ABC}\widetilde{G}_{\mu}^{A u}G_{ u}^{B ho}G_{ ho}^{C\mu}$	\mathbf{R}

Operator	Type
$\frac{4G_F}{G}\frac{e}{16-2}m_u\bar{u}_L\sigma^{\mu\nu}u_RF_{\mu\nu}$	C
$\frac{\sqrt{2}}{4G_F} \frac{10\pi^2}{e} \frac{e}{R} \frac{e}{d} I_L \sigma^{\mu\nu} d_R F_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{4G_F} \frac{10\pi^2}{\epsilon_c} \frac{e}{2} m_s \bar{s}_L \sigma^{\mu\nu} s_R F_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{4G_F}\frac{16\pi^2}{e}\frac{e}{R_e}\frac{e}{2}I_e\sigma^{\mu\nu}e_RF_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{2}}\frac{e}{16-2}m_{\mu}\bar{\mu}_L\sigma^{\mu\nu}\mu_R F_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{s}} \frac{g_s}{g_{s-2}} m_u \bar{u}_L \sigma^{\mu\nu} T^A u_B G^A_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{4G_F}\frac{10\pi^2}{\sqrt{6}}\frac{m}{16-2}m_d\bar{d}_L\sigma^{\mu\nu}T^Ad_RG^A_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{6}} \frac{g_s}{16-2} m_s \bar{s}_L \sigma^{\mu\nu} T^A s_R G^A_{\mu\nu}$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{6}} (\bar{e}_L \sigma^{\mu\nu} e_R) (\bar{u}_L \sigma_{\mu\nu} u_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{G_F}(\bar{\mu}_L\sigma^{\mu\nu}\mu_B)(\bar{u}_L\sigma_{\mu\nu}u_B)$	$^{\mathrm{C}}$
$\frac{4G_F}{4G_F}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{d}_L\sigma_{\mu\nu}d_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{c}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{s}_L\sigma_{\mu\nu}s_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{c}}(\bar{\mu}_L\sigma^{\mu\nu}\mu_R)(\bar{d}_L\sigma_{\mu\nu}d_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\overline{c}}(\bar{\mu}_L\sigma^{\mu\nu}\mu_R)(\bar{s}_L\sigma_{\mu\nu}s_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{6}}(\bar{u}_L u_R)(\bar{u}_L u_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{6}}(\bar{u}_L T^A u_R)(\bar{u}_L T^A u_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{4G_F}(\bar{u}_L u_R)(\bar{d}_L d_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{c}}(\bar{u}_L u_R)(\bar{s}_L s_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{c}}(\bar{u}_L T^A u_R)(\bar{d}_L T^A d_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{s}}(\bar{u}_L T^A u_R)(\bar{s}_L T^A s_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{G}}(\bar{d}_L d_R)(\bar{d}_L d_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{2}}(\bar{d}_L d_R)(\bar{s}_L s_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{2}}(\bar{d}_L s_R)(\bar{s}_L d_R)$	$^{\mathrm{C}}$
$\frac{\sqrt{2}}{\sqrt{6}}(\bar{s}_L s_R)(\bar{s}_L s_R)$	$^{\mathrm{C}}$
$\frac{4G_F}{\sqrt{2}}(\bar{d}_L T^A d_R)(\bar{d}_L T^A d_R)$	\mathbf{C}
$\frac{4G_F}{\sqrt{2}}(\bar{d}_L T^A d_R)(\bar{s}_L T^A s_R)$	\mathbf{C}
$\frac{\sqrt[4]{G}}{\sqrt{G}}(\bar{d}_L T^A s_R)(\bar{s}_L T^A d_R)$	\mathbf{C}
$\frac{\sqrt[4]{G_F}}{\sqrt[6]{G_F}}(\bar{s}_L T^A s_R)(\bar{s}_L T^A s_R)$	\mathbf{C}
$\frac{\sqrt{4G_F}}{\sqrt{2}}(\bar{u}_L d_R)(\bar{d}_L u_R)$	$^{\mathrm{C}}$
$\frac{\sqrt[4]{G_F}}{\sqrt[6]{3}}(\bar{u}_L s_R)(\bar{s}_L u_R)$	\mathbf{C}
$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A d_R)(\bar{d}_L T^A u_R)$	\mathbf{C}
$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A s_R)(\bar{s}_L T^A u_R)$	\mathbf{C}
$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{d}_R d_L)$	\mathbf{C}
$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{s}_R s_L)$	\mathbf{C}
$\frac{4\ddot{G}_{F}^{2}}{\sqrt{2}}(\bar{e}_{L}e_{R})(\bar{u}_{R}u_{L})$	$^{\mathrm{C}}$
$rac{4ar{G}_{F}^{2}}{\sqrt{2}}(ar{\mu}_{L}\mu_{R})(ar{d}_{R}d_{L})$	\mathbf{C}
$rac{4ar{G}_F^2}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{s}_Rs_L)$	\mathbf{C}
V 2 · · · · · · · · · · · · · · · · · ·	
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	$\frac{4G_{F}}{\sqrt{2}} \frac{e}{16\pi^{2}} m_{u} \bar{u}_{L} \sigma^{\mu\nu} u_{R} F_{\mu\nu}$ $\frac{4G_{F}}{\sqrt{2}} \frac{e}{16\pi^{2}} m_{d} \bar{d}_{L} \sigma^{\mu\nu} d_{R} F_{\mu\nu}$ $\frac{4G_{F}}{\sqrt{2}} \frac{e}{16\pi^{2}} m_{s} \bar{u}_{L} \sigma^{\mu\nu} d_{R} F_{\mu\nu}$ $\frac{4G_{F}}{\sqrt{2}} \frac{e}{16\pi^{2}} m_{e} \bar{e}_{L} \sigma^{\mu\nu} e_{R} F_{\mu\nu}$ $\frac{4G_{F}}{\sqrt{2}} \frac{e}{16\pi^{2}} m_{u} \bar{u}_{L} \sigma^{\mu\nu} H_{R} F_{\mu\nu}$ $\frac{4G_{F}}{\sqrt{2}} \frac{e}{16\pi^{2}} m_{u} \bar{u}_{L} \sigma^{\mu\nu} H_{R} G_{\mu\nu}^{A}$ $\frac{4G_{F}}{\sqrt{2}} \frac{g_{s}}{16\pi^{2}} m_{u} \bar{u}_{L} \sigma^{\mu\nu} T^{A} u_{R} G_{\mu\nu}^{A}$ $\frac{4G_{F}}{\sqrt{2}} \frac{g_{s}}{16\pi^{2}} m_{d} \bar{u}_{L} \sigma^{\mu\nu} T^{A} u_{R} G_{\mu\nu}^{A}$ $\frac{4G_{F}}{\sqrt{2}} \frac{g_{s}}{16\pi^{2}} m_{s} \bar{s}_{L} \sigma^{\mu\nu} T^{A} u_{R} G_{\mu\nu}^{A}$ $\frac{4G_{F}}{\sqrt{2}} \frac{g_{s}}{16\pi^{2}} m_{e} \bar{u}_{L} (\bar{u}_{L} \sigma_{\mu\nu} u_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{e}_{L} \sigma^{\mu\nu} \mu_{R}) (\bar{u}_{L} \sigma_{\mu\nu} u_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{e}_{L} \sigma^{\mu\nu} \mu_{R}) (\bar{d}_{L} \sigma_{\mu\nu} d_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} \sigma^{\mu\nu} \mu_{R}) (\bar{d}_{L} \sigma_{\mu\nu} d_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} u_{R}) (\bar{u}_{L} u_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} u_{R}) (\bar{u}_{L} u_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} u_{R}) (\bar{u}_{L} u_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} u_{R}) (\bar{d}_{L} d_{R})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{d}_{L} d_{R}) (\bar{d}_{L} d_{L})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} d_{R}) (\bar{d}_{R} d_{L})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} d_{R}) (\bar{d}_{R} d_{L})$ $\frac{4G_{F}}{\sqrt{2}} (\bar{u}_{L} d_{R$

$\begin{array}{c} \text{CSRR_eedd} & \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{d}_{L}d_{R}) & \text{CCSRR_eeee} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{e}_{L}e_{R}) & \text{CCSRR_eeeumun} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{e}_{L}e_{R}) & \text{CCSRR_eemumn} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{e}_{L}e_{R}) & \text{CCSRR_eess} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_eemumu} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_emumue} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}e_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_mumudud} \\ \frac{3G_{+}^{2}}{2}(\bar{e}_{L}\mu_{R})(\bar{\mu}_{L}e_{R}) & \text{CCSRR_mumumumu} \\ \frac{3G_{+}^{2}}{2}(\bar{\mu}_{L}\mu_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_mumunumu} \\ \frac{3G_{+}^{2}}{2}(\bar{\mu}_{L}\mu_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{\mu}_{L}\mu_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{L}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{L}u_{R}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{L}u_{R}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{L}u_{R}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{L}u_{R}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{R}u_{R}u_{R}) & \text{CCSRR_mumunu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R}u_{L})(\bar{u}_{R}u_{R}u_{R}) & \text{CCSRR_mumununu} \\ \frac{3G_{+}^{2}}{2}(\bar{u}_{L}\mu_{R})(\bar{u}_{R}u_$	WC name	Operator	Type
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRL_mumuuu	$\frac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{u}_Ru_L)$	\mathbf{C}
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRR_eedd		$^{\mathrm{C}}$
$\begin{array}{c} \operatorname{CSRR_eess} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{e}_L e_R) (\bar{s}_L s_R) \\ \operatorname{CSRR_eeuu} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{e}_L e_R) (\bar{u}_L u_R) \\ \operatorname{CSRR_emumue} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{e}_L e_R) (\bar{u}_L u_R) \\ \frac{\sqrt{2}}{\sqrt{2}} (\bar{e}_L \mu_R) (\bar{\mu}_L e_R) \\ \operatorname{CSRR_mumudud} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{d}_L d_R) \\ \operatorname{CSRR_mumumumu} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_R) \\ \operatorname{CSRR_mumumumu} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_R) \\ \operatorname{CSRR_mumumu} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_R) \\ \operatorname{CSRR_mumunu} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_R) \\ \operatorname{CV1LL_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_L \gamma_{\mu} d_L) \\ \operatorname{CV1LL_dudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} d_R) \\ \operatorname{CV1LR_dddd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{d}_L \gamma^{\mu} d_L) (\bar{d}_R \gamma_{\mu} d_R) \\ \operatorname{CV1LR_ddss} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{d}_L \gamma^{\mu} d_L) (\bar{u}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_dssd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{d}_L \gamma^{\mu} d_L) (\bar{u}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_ssdd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{d}_L \gamma^{\mu} d_L) (\bar{u}_R \gamma_{\mu} d_R) \\ \operatorname{CV1LR_ssdd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{d}_L \gamma^{\mu} d_L) (\bar{u}_R \gamma_{\mu} d_R) \\ \operatorname{CV1LR_ssuu} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{d}_L \gamma^{\mu} d_L) (\bar{u}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_R \gamma_{\mu} u_R) \\ \operatorname{CV1LR_uudd} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_L \gamma_{\mu} T^A d_L) \\ \end{array} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_L \gamma_{\mu} T^A d_L) \\ \end{array} & \frac{\sqrt{2}}{\sqrt{2}} (\bar{u}_L \gamma^{\mu} u_L) (\bar{d}_L \gamma_{\mu} T^A d_L$	CSRR_eeee	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{e}_L e_R)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRR_eemumu	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{\mu}_L \mu_R)$	\mathbf{C}
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRR_eess	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{s}_L s_R)$	\mathbf{C}
$\begin{array}{c} \text{CSRR_mumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) \\ \text{CSRR_mumumum} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) \\ \text{CSRR_mumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_L\mu_R) \\ \text{CSRR_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) \\ \text{CV1LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) \\ \text{CV1LL_dudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) \\ \text{CV1LR_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_suu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L$	CSRR_eeuu	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{u}_L u_R)$	\mathbf{C}
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRR_emumue	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_Le_R)$	\mathbf{C}
$\begin{array}{llllllllllllllllllllllllllllllllllll$	CSRR_mumudd	$\frac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{d}_Ld_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CSRR_mumuuu} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CV1LL_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LL_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) & \text{R} \\ \text{CV1LR_dddd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_ddss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_ddss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR_dssd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) & \text{CV1LR_ssdd} \\ & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{CV1LR_ssss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_ssuu} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{CV1LR_uudd} \\ & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{CV1LR_uudd} \\ & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_uuuu} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_uuudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1RR_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1RR_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV2RL_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV3LL_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_R)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CV8LL_uudd} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CV8LL_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CVSLL_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CVSLL_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CVSLL_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu T$	CSRR_mumumumu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{\mu}_L\mu_R)$	\mathbf{C}
$\begin{array}{c} \text{CV1LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) \\ \text{CV1LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) \\ \text{CV1LR_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV8LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \end{array}$	CSRR_mumuss	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Ls_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CV1LL_uuss} & \frac{4G_F^2}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) \\ \text{CV1LR_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV2RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_L\gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV8LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A d_L) \\ \text{CV8LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A d_L) \\ \text{CV8LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A d_L) \\ \text{CV9LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A d_L) \\ \text{CV9LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A d_L) \\ \end{array}$	CSRR_mumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R)$	\mathbf{C}
$\begin{array}{c} \text{CV1LR_dddd} & \frac{4 \widetilde{G}_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR_ddss} & \frac{4 G_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_dduu} & \frac{4 G_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1LR_dssd} & \frac{4 G_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu d_R) \\ \text{CV1LR_ssdd} & \frac{4 G_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4 G_F}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR_ssuu} & \frac{4 G_F}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_usuu} & \frac{4 G_F}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu u_R) \\ \text{CV1LR_usuu} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu d_L) (\bar{d}_R \gamma_\mu u_R) \\ \text{CV1LR_uusu} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_uusu} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_uuuu} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_uuuu} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1RR_uusu} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{d}_R \gamma_\mu s_R) \\ \text{CV3LL_uudd} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{d}_L \gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{d}_L \gamma_\mu T^A d_L) \\ \text{CV3LL_uuss} & \frac{4 G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A s_L) \\ \end{array}$	CV1LL_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L)$	\mathbf{R}
$\begin{array}{c} \text{CV1LR_ddss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_dduu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1LR_dssd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{d}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu d_R) \\ \text{CV1LR_ssdd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_ssuu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{s}_L \gamma^\mu d_L) (\bar{d}_R \gamma_\mu u_R) \\ \text{CV1LR_ussu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu d_L) (\bar{d}_R \gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR_uuss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV3LL_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{d}_L \gamma_\mu T^A d_L) \\ \text{CV8LL_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{d}_L \gamma_\mu T^A d_L) \\ \text{CV8LL_uuss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A d_L) \\ \text{CV9LLR_ddd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A d_L) \\ \text{CV9LLR_ddd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A d_L) \\ \text{CV9LLR_ddd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A d_L) \\ \text{CV9LLR_ddd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A d_L) \\ \text{CV9LLR_ddd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A d_L) \\ \end{array}$	CV1LL_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L)$	\mathbf{R}
$\begin{array}{c} \text{CV1LR_dduu} & \frac{4G_F^2}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV8LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \\ \text{RCV9LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \\ \end{array}$	CV1LR_dddd	$\frac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{d}_R\gamma_\mu d_R)$	\mathbf{R}
$\begin{array}{c} \text{CV1LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1RR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV2RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \\ \text{CV3LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \\ \end{array}$	CV1LR_ddss	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R)$	\mathbf{R}
$\begin{array}{c} \text{CV1LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1RR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV3LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \\ \text{CV8LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \\ \text{CV9LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \\ \end{array}$	CV1LR_dduu	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R)$	\mathbf{R}
$\begin{array}{c} \text{CV1LR_ssss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_ssuu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1LR_uddu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu d_L) (\bar{d}_R \gamma_\mu u_R) \\ \text{CV1LR_ussu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu u_R) \\ \text{CV1LR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR_uuss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV1LR_uuuu} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{u}_R \gamma_\mu u_R) \\ \text{CV1RR_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1RR_uuss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_R \gamma^\mu u_R) (\bar{s}_R \gamma_\mu s_R) \\ \text{CV3LL_uudd} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{d}_L \gamma_\mu T^A d_L) \\ \text{CV8LL_uuss} & \frac{4 \overset{\bullet}{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu T^A u_L) (\bar{s}_L \gamma_\mu T^A s_L) \\ \end{array} \text{R} \end{array}$	CV1LR_dssd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R)$	\mathbf{C}
$\begin{array}{c} \text{CV1LR_ssuu} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{u}_R\gamma_{\mu}u_R) \\ \text{CV1LR_uddu} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}u_R) \\ \text{CV1LR_ussu} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}u_R) \\ \text{CV1LR_uudd} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}d_R) \\ \text{CV1LR_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{s}_R\gamma_{\mu}s_R) \\ \text{CV1LR_uuuu} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{u}_R\gamma_{\mu}u_R) \\ \text{CV1RR_uudd} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{u}_R\gamma_{\mu}u_R) \\ \text{CV1RR_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}u_R)(\bar{s}_R\gamma_{\mu}s_R) \\ \text{CV3LL_uudd} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{d}_L\gamma_{\mu}T^Ad_L) \\ \text{CV8LL_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) \\ \text{CV8LL_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) \\ \text{CV9LL_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) \\ \text{CV9LL_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) \\ \text{CV9LL_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) \\ \text{CV9LL_uuss} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) \\ \end{array}$	CV1LR_ssdd	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R)$	\mathbf{R}
$\begin{array}{c} \text{CV1LR_uddu} & \frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{CC} \\ \text{CV1LR_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}u_R) & \text{CC} \\ \text{CV1LR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}d_R) & \text{RC} \\ \text{CV1LR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{s}_R\gamma_{\mu}s_R) & \text{RC} \\ \text{CV1LR_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{u}_R\gamma_{\mu}u_R) & \text{RC} \\ \text{CV1RR_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}u_R)(\bar{d}_R\gamma_{\mu}d_R) & \text{RC} \\ \text{CV1RR_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}u_R)(\bar{s}_R\gamma_{\mu}s_R) & \text{RC} \\ \text{CV2LL_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{d}_L\gamma_{\mu}T^Ad_L) & \text{RC} \\ \text{CV3LL_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L) & \text{RC} \\ \end{array}$	CV1LR_ssss	$rac{4G_F}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{s}_R\gamma_\mu s_R)$	\mathbf{R}
CV1LR_ussu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R)$ CV1LR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R)$ RCV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R)$ RCV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R)$ RCV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R)$ RCV1RR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R)$ RCV1RR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R)$ RCV8LL_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L)$ RCV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L)$ RCV9LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L)$	CV1LR_ssuu	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R)$	\mathbf{R}
CV1LR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad \text{R}$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad \text{R}$ CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad \text{R}$ CV1RR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV8LL_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \qquad \qquad \text{R}$ CV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$ CV9LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$	CV1LR_uddu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R)$	\mathbf{C}
CV1LR_uuuu $\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad \text{R}$ CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad \text{R}$ CV1RR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV8LL_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \qquad \qquad \text{R}$ CV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$ CV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$	CV1LR_ussu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R)$	\mathbf{C}
CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad \text{R}$ CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad \text{R}$ CV1RR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV8LL_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \qquad \qquad \text{R}$ CV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$ CV9LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$ CV9LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$	CV1LR_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R)$	\mathbf{R}
CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad \text{R}$ CV1RR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV8LL_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \qquad \qquad \text{R}$ CV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$ CV9LR_ddd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A d_L)(\bar{s}_L\gamma_\mu T^A d_L) \qquad \qquad \text{R}$	CV1LR_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R)$	\mathbf{R}
CV1RR_uuss $\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad \text{R}$ CV8LL_uudd $\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) \qquad \qquad \text{R}$ CV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$ CV9LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) \qquad \qquad \text{R}$	CV1LR_uuuu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R)$	\mathbf{R}
CV8LL_uudd $\frac{\sqrt[4]{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{d}_L\gamma_{\mu}T^Ad_L)$ RCV8LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L)$ RCV9LL_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Ad_L)(\bar{s}_L\gamma_{\mu}T^As_L)$ RCV9LL_uuss	CV1RR_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{d}_R\gamma_\mu d_R)$	\mathbf{R}
CV8LL_uuss $\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L)$ R	CV1RR_uuss	VZ	\mathbf{R}
$\sqrt{2}$	CV8LL_uudd	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{d}_L\gamma_{\mu}T^Ad_L)$	\mathbf{R}
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CV8LL_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L)$	${ m R}$
$\begin{array}{cccc} \text{CV8LR_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R) & \text{C} \\ \text{CV8LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{d}_R\gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \end{array}$	CV8LR_dddd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}T^Ad_L)(\bar{d}_R\gamma_{\mu}T^Ad_R)$	${ m R}$
$\begin{array}{lll} \text{CV8LR_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R) & \text{C} \\ \text{CV8LR_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{d}_R\gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \end{array}$	CV8LR_ddss	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}T^Ad_L)(\bar{s}_R\gamma_{\mu}T^As_R)$	${ m R}$
$\begin{array}{ccc} \text{CV8LR_dssd} & \frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\overline{d}_L \gamma^\mu T^A s_L) (\overline{s}_R \gamma_\mu T^A d_R) & \text{CCV8LR_ssdd} \\ \text{CV8LR_ssdd} & \frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\overline{s}_L \gamma^\mu T^A s_L) (\overline{d}_R \gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR_ssss} & \frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\overline{s}_L \gamma^\mu T^A s_L) (\overline{s}_R \gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR_ssuu} & \frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\overline{s}_L \gamma^\mu T^A s_L) (\overline{u}_R \gamma_\mu T^A u_R) & \text{R} \\ \end{array}$	CV8LR_dduu	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R)$	R
CV8LR_ssdd $\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{d}_R\gamma_\mu T^A d_R) \qquad \qquad \text{R}$ CV8LR_ssss $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A s_R) \qquad \qquad \text{R}$ CV8LR_ssuu $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R) \qquad \qquad \text{R}$	CV8LR_dssd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R)$	\mathbf{C}
CV8LR_ssss $\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A s_R) \qquad \qquad \text{R}$ CV8LR_ssuu $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R) \qquad \qquad \text{R}$	CV8LR_ssdd	$\frac{4\check{G}_F^F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{d}_R\gamma_\mu T^A d_R)$	${ m R}$
CV8LR_ssuu $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}T^As_L)(\bar{u}_R\gamma_{\mu}T^Au_R)$ R	CV8LR_ssss	$\frac{4\check{G_F}}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A s_R)$	${ m R}$
4 ^V C - · · ·	CV8LR_ssuu	$\frac{4\tilde{G_F}}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R)$	${ m R}$
CV8LR_uddu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Ad_L)(\bar{d}_R\gamma_{\mu}T^Au_R)$ C	CV8LR_uddu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A d_L)(\bar{d}_R\gamma_\mu T^A u_R)$	\mathbf{C}

WC name	Operator	Type
CV8LR_ussu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^As_L)(\bar{s}_R\gamma_{\mu}T^Au_R)$	C
CV8LR_uudd	$\frac{4\ddot{G}_F^2}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_R\gamma_\mu T^A d_R)$	${ m R}$
CV8LR_uuss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_R\gamma_{\mu}T^As_R)$	${ m R}$
CV8LR_uuuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{u}_R\gamma_{\mu}T^Au_R)$	${ m R}$
CV8RR_uudd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu T^A u_R)(\bar{d}_R\gamma_\mu T^A d_R)$	${ m R}$
CV8RR_uuss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{s}_R\gamma_{\mu}T^As_R)$	${ m R}$
CVLL_dddd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_L\gamma_\mu d_L)$	${ m R}$
CVLL_ddss	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_L\gamma_\mu s_L)$	${ m R}$
CVLL_dssd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_L\gamma_\mu d_L)$	\mathbf{R}
CVLL_eedd	$\frac{4\check{G}_F^F}{\sqrt{2}}(\bar{e}_L\gamma^\mu e_L)(\bar{d}_L\gamma_\mu d_L)$	${ m R}$
CVLL_eeee	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{e}_L\gamma_{\mu}e_L)$	${ m R}$
CVLL_eemumu	$rac{4 G_F}{\sqrt{2}} (ar{e}_L \gamma^\mu e_L) (ar{\mu}_L \gamma_\mu \mu_L)$	\mathbf{R}
CVLL_eess	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{s}_L\gamma_{\mu}s_L)$	${ m R}$
CVLL_eeuu	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{u}_L\gamma_{\mu}u_L)$	\mathbf{R}
CVLL_mumudd	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{d}_L\gamma_\mu d_L)$	\mathbf{R}
CVLL_mumumumu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{\mu}_L\gamma_\mu\mu_L)$	\mathbf{R}
CVLL_mumuss	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{s}_L\gamma_\mu s_L)$	\mathbf{R}
CVLL_mumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{u}_L\gamma_\mu u_L)$	R
CVLL_ssss	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_L\gamma_\mu s_L)$	\mathbf{R}
CVLL_uuuu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_L\gamma_\mu u_L)$	R
CVLR_ddee	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{e}_R\gamma_\mu e_R)$	\mathbf{R}
CVLR_ddmumu	$\frac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{\mu}_R\gamma_\mu\mu_R)$	\mathbf{R}
CVLR_eedd	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^\mu e_L)(\bar{d}_R\gamma_\mu d_R)$	\mathbf{R}
CVLR_eeee	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^\mu e_L)(\bar{e}_R\gamma_\mu e_R)$	\mathbf{R}
CVLR_eemumu	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{\mu}_R\gamma_{\mu}\mu_R)$	\mathbf{R}
CVLR_eess	$\frac{4G_F}{\sqrt{2}}(ar{e}_L\gamma^\mu e_L)(ar{s}_R\gamma_\mu s_R)$	\mathbf{R}
CVLR_eeuu	$rac{4G_F}{\sqrt{2}}(ar{e}_L\gamma^\mu e_L)(ar{u}_R\gamma_\mu u_R)$	R
CVLR_emumue	$rac{4ar{G}_F}{\sqrt{2}}(ar{e}_L\gamma^\mu\mu_L)(ar{\mu}_R\gamma_\mu e_R)$	\mathbf{C}
CVLR_mumudd	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{d}_R\gamma_\mu d_R)$	\mathbf{R}
CVLR_mumuee	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{e}_R\gamma_\mu e_R)}{\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{\mu}_R\gamma_\mu\mu_R)}$ $\frac{\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{s}_R\gamma_\mu s_R)}{\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{s}_R\gamma_\mu s_R)}$	\mathbf{R}
CVLR_mumumumu	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{\mu}_R\gamma_\mu\mu_R)$	\mathbf{R}
CVLR_mumuss	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{s}_R\gamma_\mu s_R)$	\mathbf{R}
CVLR_mumuuu	$\frac{-\omega_L}{\sqrt{E}}(\mu_L\gamma^\mu\mu_L)(u_R\gamma_\mu u_R)$	${ m R}$
CVLR_ssee	$\frac{\frac{4G_{F}}{\sqrt{2}}(\bar{s}_{L}\gamma^{\mu}s_{L})(\bar{e}_{R}\gamma_{\mu}e_{R})}{\frac{4G_{F}}{\sqrt{2}}(\bar{s}_{L}\gamma^{\mu}s_{L})(\bar{\mu}_{R}\gamma_{\mu}\mu_{R})}$ $\frac{\frac{4G_{F}}{\sqrt{2}}(\bar{u}_{L}\gamma^{\mu}u_{L})(\bar{e}_{R}\gamma_{\mu}e_{R})}{\frac{4G_{F}}{\sqrt{2}}(\bar{u}_{L}\gamma^{\mu}u_{L})(\bar{\mu}_{R}\gamma_{\mu}\mu_{R})}$	${ m R}$
CVLR_ssmumu	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{\mu}_R\gamma_{\mu}\mu_R)$	R
CVLR_uuee	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{e}_R\gamma_\mu e_R)$	${ m R}$
CVLR_uumumu	$rac{4G_F}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{\mu}_R\gamma_\mu\mu_R)$	${ m R}$

WC name	Operator	Type
CVRR_dddd	$rac{4G_F}{\sqrt{2}}(ar{d}_R\gamma^\mu d_R)(ar{d}_R\gamma_\mu d_R)$	R
CVRR_ddss	$rac{4reve{G}_F}{\sqrt{2}}(ar{d}_R\gamma^\mu d_R)(ar{s}_R\gamma_\mu s_R)$	R
CVRR_dssd	$\frac{4\ddot{G_F}}{\sqrt{2}}(ar{d}_R\gamma^\mu s_R)(ar{s}_R\gamma_\mu d_R)$	R
CVRR_eedd	$rac{4G_F}{\sqrt{2}}(ar{e}_R\gamma^\mu e_R)(ar{d}_R\gamma_\mu d_R)$	R
CVRR_eeee	$rac{4G_F}{\sqrt{2}}(ar{e}_R\gamma^\mu e_R)(ar{e}_R\gamma_\mu e_R)$	R
CVRR_eemumu	$rac{4ar{G}_F}{\sqrt{2}}(ar{e}_R\gamma^\mu e_R)(ar{\mu}_R\gamma_\mu\mu_R)$	R
CVRR_eess	$rac{4ar{G}_F}{\sqrt{2}}(ar{e}_R\gamma^\mu e_R)(ar{s}_R\gamma_\mu s_R)$	R
CVRR_eeuu	$rac{4ar{G}_F}{\sqrt{2}}(ar{e}_R\gamma^\mu e_R)(ar{u}_R\gamma_\mu u_R)$	R
CVRR_mumudd	$rac{4ar{G}_F}{\sqrt{2}}(ar{\mu}_R\gamma^\mu\mu_R)(ar{d}_R\gamma_\mu d_R)$	R
CVRR_mumumumu	$rac{4ar{G}_F}{\sqrt{2}}(ar{\mu}_R\gamma^\mu\mu_R)(ar{\mu}_R\gamma_\mu\mu_R)$	R
CVRR_mumuss	$rac{4ar{G}_F}{\sqrt{2}}(ar{\mu}_R\gamma^\mu\mu_R)(ar{s}_R\gamma_\mu s_R)$	R
CVRR_mumuuu	$rac{4 \overline{G_F}}{\sqrt{2}} (ar{\mu}_R \gamma^\mu \mu_R) (ar{u}_R \gamma_\mu u_R)$	R
CVRR_ssss	$rac{4ar{G_F}}{\sqrt{2}}(ar{s}_R\gamma^\mu s_R)(ar{s}_R\gamma_\mu s_R)$	R
CVRR_uuuu	$\frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{u}_R\gamma_\mu u_R)$	R

mue

WC name	Operator	Type
Cgamma_mue	$\bar{e}_L \sigma^{\mu\nu} \mu_R F_{\mu\nu}$	\overline{C}
Cgamma_emu	$ar{\mu}_L \sigma^{\mu u} e_R \dot{F}_{\mu u}$	$^{\mathrm{C}}$
CVLL_eemue	$(ar{e}_L \gamma^\mu e_L)(\dot{ar{e}}_L \gamma_\mu \mu_L)$	\mathbf{C}
CVLL_muemumu	$(ar{e}_L \gamma^\mu \mu_L) (ar{\mu}_L \dot{\gamma}_\mu \mu_L)$	\mathbf{C}
CVLL_mueuu	$(ar{e}_L \gamma^\mu \mu_L) (ar{u}_L \gamma_\mu u_L)$	$^{\mathrm{C}}$
CVLL_muedd	$(ar{e}_L \gamma^\mu \mu_L) (ar{d}_L \gamma_\mu d_L)$	$^{\mathrm{C}}$
CVLL_muess	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{s}_L \gamma_\mu s_L)$	\mathbf{C}
CVRR_eemue	$(\bar{e}_R \gamma^\mu e_R)(\bar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVRR_muemumu	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{\mu}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVRR_mueuu	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{u}_R \gamma_\mu u_R)$	$^{\mathrm{C}}$
CVRR_muedd	$(ar{e}_R \gamma^\mu \mu_R) (ar{d}_R \gamma_\mu d_R)$	\mathbf{C}
CVRR_muess	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{s}_R \gamma_\mu s_R)$	$^{\mathrm{C}}$
CVLR_eemue	$(\bar{e}_L \gamma^\mu e_L)(\bar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVLR_mueee	$(ar{e}_L\gamma^\mu\mu_L)(ar{e}_R\gamma_\mu e_R)$	$^{\mathrm{C}}$
CVLR_muemumu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{\mu}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVLR_mumumue	$(\bar{\mu}_L \gamma^\mu \mu_L)(\bar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVLR_mueuu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{u}_R \gamma_\mu u_R)$	$^{\mathrm{C}}$
CVLR_muedd	$(ar{e}_L \gamma^\mu \mu_L) (ar{d}_R \gamma_\mu d_R)$	\mathbf{C}
CVLR_muess	$(ar{e}_L \gamma^\mu \mu_L) (ar{s}_R \gamma_\mu s_R)$	$^{\mathrm{C}}$
CVLR_uumue	$(\bar{u}_L \gamma^\mu u_L)(\bar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CVLR_ddmue	$(ar{d}_L \gamma^\mu d_L) (ar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$

WC name	Operator	Type
CVLR_ssmue	$(\bar{s}_L \gamma^\mu s_L)(\bar{e}_R \gamma_\mu \mu_R)$	C
CSRL_mueuu	$(ar{e}_L\mu_R)(ar{u}_Ru_L)$	C
CSRL_emuuu	$(ar{\mu}_L e_R)(ar{u}_R u_L)$	C
CSRL_muedd	$(ar{e}_L\mu_R)(ar{d}_Rd_L)$	C
CSRL_muess	$(ar{e}_L\mu_R)(ar{s}_Rs_L)$	$^{\mathrm{C}}$
CSRL_emudd	$(ar{\mu}_L e_R)(ar{d}_R d_L)$	$^{\mathrm{C}}$
CSRL_emuss	$(ar{\mu}_L e_R)(ar{s}_R s_L)$	$^{\mathrm{C}}$
CSRR_eemue	$(ar{e}_L e_R)(ar{e}_L \mu_R)$	$^{\mathrm{C}}$
CSRR_eeemu	$(ar{e}_L e_R)(ar{\mu}_L e_R)$	$^{\mathrm{C}}$
CSRR_muemumu	$(ar{e}_L\mu_R)(ar{\mu}_L\mu_R)$	$^{\mathrm{C}}$
CSRR_emumumu	$(ar{\mu}_L e_R)(ar{\mu}_L \mu_R)$	\mathbf{C}
CSRR_mueuu	$(ar{e}_L\mu_R)(ar{u}_Lu_R)$	\mathbf{C}
CSRR_emuuu	$(ar{\mu}_L e_R)(ar{u}_L u_R)$	\mathbf{C}
CTRR_mueuu	$(\bar{e}_L \sigma^{\mu u} \mu_R) (\bar{u}_L \sigma_{\mu u} u_R)$	\mathbf{C}
CTRR_emuuu	$(ar{\mu}_L \sigma^{\mu u} e_{ar{R}}) (ar{u}_L \sigma_{\mu u} u_R)$	\mathbf{C}
CSRR_muedd	$(ar{e}_L\mu_R)(d_Ld_R)$	\mathbf{C}
CSRR_muess	$(ar{e}_L\mu_R)(ar{s}_Ls_R)$	\mathbf{C}
CSRR_emudd	$(ar{\mu}_L e_R)(ar{d}_L d_R)$	$^{\mathrm{C}}$
CSRR_emuss	$(ar{\mu}_L e_R)(ar{s}_L s_R)$	\mathbf{C}
CTRR_muedd	$(ar{e}_L\sigma^{\mu u}\mu_R)(ar{d}_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
CTRR_muess	$(\bar{e}_L \sigma^{\mu u} \mu_R) (\bar{s}_L \sigma_{\mu u} s_R)$	$^{\mathrm{C}}$
CTRR_emudd	$(ar{\mu}_L \sigma^{\mu u} e_R) (ar{d}_L \sigma_{\mu u} d_R)$	$^{\mathrm{C}}$
CTRR_emuss	$(\bar{\mu}_L \sigma^{\mu\nu} e_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	С

nunumue

WC name	Operator	Type
CVLL_nuenuemue	$(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{e}_{L}\gamma_{\mu}\mu_{L})$	С
CVLL_numunueemu	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_numunuemue	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{e}_{L}\gamma_{\mu}\mu_{L})$	$^{\mathrm{C}}$
CVLL_numunumumue	$(ar{ u}_{\mu L} \gamma^{\mu} u_{\mu L}) (ar{e}_L \gamma_{\mu} \mu_L)$	$^{\mathrm{C}}$
CVLL_nutaunueemu	$(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_nutaunuemue	$(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{e}_{L}\gamma_{\mu}\mu_{L})$	$^{\mathrm{C}}$
CVLL_nutaunumuemu	$\mathrm{i}\left(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L} ight)(ar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_nutaunumumue	$e\left(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L} ight)(ar{e}_{L}\gamma_{\mu}\mu_{L})$	$^{\mathrm{C}}$
CVLL_nutaunutaum	14 $(ar{ u}_{ au L} \gamma^{\mu} u_{ au L}) (ar{e}_L \gamma_{\mu} \mu_L)$	$^{\mathrm{C}}$
CVLR_nuenuemue	$(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{e}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$
CVLR_numunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{\mu}_{R}\gamma_{\mu}e_{R})$	$^{\mathrm{C}}$
CVLR_numunuemue	$(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{e}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$
CVLR_numunumumue	$(\bar{ u}_{\mu L} \gamma^{\mu} u_{\mu L})(\bar{e}_R \gamma_{\mu} \mu_R)$	\mathbf{C}
CVLR_nutaunueemu	$(\bar{\nu}_{eL}\gamma^{\mu} u_{\tau L})(\bar{\mu}_{R}\gamma_{\mu}e_{R})$	$^{\mathrm{C}}$
CVLR_nutaunuemue	$(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_R\gamma_{\mu}\mu_R)$	\mathbf{C}

WC name	Operator	Type
CVLR_nutaunumuem	u $(ar{ u}_{\mu L} \gamma^{\mu} u_{ au L}) (ar{\mu}_R \gamma_{\mu} e_R)$	C
CVLR_nutaunumumu	e $(ar{ u}_{\mu L} \gamma^{\mu} u_{ au L}) (ar{e}_R \gamma_{\mu} \mu_R)$	\mathbf{C}
CVLR_nutaunutaum	$\mathrm{u}(\bar{ u}_{ au L}\gamma^{\mu} u_{ au L})(\bar{e}_{R}\gamma_{\mu}\mu_{R})$	$^{\mathrm{C}}$

ffnunu

WC name	Operator	Type
CVLL_nuenuedd	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{d}_L\gamma_{\mu}d_L)$	R
CVLL_nuenueee	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_L\gamma_{\mu}e_L)$	R
CVLL_nuenuemumu	$\frac{4\ddot{G}_F^2}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{\mu}_L\gamma_\mu\mu_L)$	R
CVLL_nuenuess	$\frac{4\check{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{s}_L\gamma_\mu s_L)$	R
CVLL_nuenueuu	$\frac{4\breve{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{eL})(ar{u}_L\gamma_\mu u_L)$	R
CVLL_nuenumudd	$rac{4reve{G_F}}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{d}_L\gamma_{\mu}d_L)$	\mathbf{C}
CVLL_nuenumuee	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{e}_L\gamma_\mu e_L)$	\mathbf{C}
CVLL_nuenumumumu	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{\mu}_L\gamma_\mu\mu_L)$	\mathbf{C}
CVLL_nuenumuss	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{s}_L\gamma_\mu s_L)$	\mathbf{C}
CVLL_nuenumuuu	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{\mu L})(ar{u}_{L}\gamma_{\mu}u_{L})$	\mathbf{C}
CVLL_nuenutaudd	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{ au L})(ar{d}_L\gamma_\mu d_L)$	\mathbf{C}
CVLL_nuenutauee	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L)$	\mathbf{C}
CVLL_nuenutaumumu	$4 rac{4 G_F}{\sqrt{2}} (ar{ u}_{eL} \gamma^\mu u_{ au L}) (ar{\mu}_L \gamma_\mu \mu_L)$	\mathbf{C}
CVLL_nuenutauss	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{s}_L\gamma_{\mu}s_L)$	\mathbf{C}
CVLL_nuenutauuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L)$	\mathbf{C}
${\tt CVLL_numunumudd}$	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{d}_L\gamma_\mu d_L)$	R
CVLL_numunumuee	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{e}_L\gamma_\mu e_L)$	R
CVLL_numunumumumu	$4 rac{4G_F}{\sqrt{2}} (ar{ u}_{\mu L} \gamma^\mu u_{\mu L}) (ar{\mu}_L \gamma_\mu \mu_L)$	R
CVLL_numunumuss	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{s}_L\gamma_\mu s_L)$	R
CVLL_numunumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_L\gamma_{\mu}u_L)$	R
${\tt CVLL_numunutaudd}$	$rac{4ar{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{d}_L\gamma_\mu d_L)$	\mathbf{C}
CVLL_numunutauee	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{e}_L\gamma_\mu e_L)$	\mathbf{C}
CVLL_numunutaumum	$\sin rac{4 G_F}{\sqrt{2}} (ar{ u}_{\mu L} \gamma^\mu u_{ au L}) (ar{\mu}_L \gamma_\mu \mu_L)$	\mathbf{C}
CVLL_numunutauss	$rac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{s}_L\gamma_{\mu}s_L)$	\mathbf{C}
CVLL_numunutauuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L)$	\mathbf{C}
CVLL_nutaunutaudd	$4 \frac{4 \widetilde{G_F}}{\sqrt{2}} (ar{ u}_{ au L} \gamma^\mu u_{ au L}) (ar{d}_L \gamma_\mu d_L)$	R
CVLL_nutaunutauee	$+rac{4 \overline{G_F}}{\sqrt{2}} (ar{ u}_{ au L} \gamma^\mu u_{ au L}) (ar{e}_L \gamma_\mu e_L)$	R
CVLL_nutaunutaumu	$\frac{\sqrt{G_F}}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{\mu}_L\gamma_\mu\mu_L)$	R
	$+rac{4reve{G_F}}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{s}_L\gamma_{\mu}s_L)$	R
CVLL_nutaunutauuu	$4\frac{4\widetilde{G}_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_L)(ar{u}_L\gamma_\mu u_L)$	R
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WC name	Operator	Type
CVLR_nuenuedd	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{d}_R\gamma_{\mu}d_R)$	R
CVLR_nuenueee	$\frac{4\check{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{eL})(\bar{e}_R\gamma_\mu e_R)$	R
CVLR_nuenuemumu	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{eL})(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_nuenuess	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{eL})(\bar{s}_R\gamma_\mu s_R)$	\mathbf{R}
CVLR_nuenueuu	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{eL})(\bar{u}_R\gamma_\mu u_R)$	\mathbf{R}
CVLR_nuenumudd	$\frac{4\check{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\mu L})(\bar{d}_R\gamma_\mu d_R)$	\mathbf{C}
CVLR_nuenumuee	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\mu L})(\bar{e}_R\gamma_\mu e_R)$	\mathbf{C}
CVLR_nuenumumumu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\mu L})(\bar{\mu}_R\gamma_\mu\mu_R)$	\mathbf{C}
CVLR_nuenumuss	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{\mu L})(\bar{s}_R\gamma_\mu s_R)$	\mathbf{C}
CVLR_nuenumuuu	$\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{u}_R\gamma_{\mu}u_R)$	\mathbf{C}
CVLR_nuenutaudd	$\frac{4\ddot{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{d}_R\gamma_\mu d_R)$	\mathbf{C}
CVLR_nuenutauee	$\frac{4\ddot{G}_F^2}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{e}_R\gamma_\mu e_R)$	\mathbf{C}
CVLR_nuenutaumumu	$4\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{\mu}_R\gamma_{\mu}\mu_R)$	\mathbf{C}
CVLR_nuenutauss	$\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(ar{ u}_{eL}\gamma^{\mu} u_{ au L})(ar{s}_R\gamma_{\mu}s_R)$	\mathbf{C}
CVLR_nuenutauuu	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{\tau L})(\bar{u}_R\gamma_{\mu}u_R)$	\mathbf{C}
CVLR_numunumudd	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{d}_R\gamma_{\mu}d_R)$	\mathbf{R}
CVLR_numunumuee	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_R\gamma_{\mu}e_R)$	\mathbf{R}
CVLR_numunumumumu	$4\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{\mu}_R\gamma_\mu\mu_R)$	\mathbf{R}
CVLR_numunumuss	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{s}_R\gamma_{\mu}s_R)$	\mathbf{R}
CVLR_numunumuuu	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_R\gamma_{\mu}u_R)$	\mathbf{R}
CVLR_numunutaudd	$\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(\bar{d}_R\gamma_{\mu}d_R)$	\mathbf{C}
CVLR_numunutauee	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_R\gamma_{\mu}e_R)$	\mathbf{C}
CVLR_numunutaumum	$u^{4\widetilde{G}_{F}^{c}}(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(ar{\mu}_{R}\gamma_{\mu}\mu_{R})$	\mathbf{C}
CVLR_numunutauss	$\frac{4\check{G}_F^c}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{s}_R\gamma_\mu s_R)$	\mathbf{C}
CVLR_numunutauuu	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_R\gamma_{\mu}u_R)$	\mathbf{C}
CVLR_nutaunutaudd	$4\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{d}_R\gamma_\mu d_R)$	\mathbf{R}
	$+\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{e}_R\gamma_{\mu}e_R)$	R
CVLR_nutaunutaumu	$\Delta \widetilde{G}_F^F (ar{ u}_{ au L} \gamma^\mu u_{ au L}) (ar{\mu}_R \gamma_\mu \mu_R)$	R
	$=rac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{s}_R\gamma_\mu s_R)$	R
CVLR_nutaunutauuu	$4\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{u}_R\gamma_\mu u_R)$	R