# 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{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}\gamma_5\mu)$	$\mathbf{C}$
C10p_sdmumu	$rac{4 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	$\frac{4\overleftarrow{G}_F}{\sqrt{2}}V_{ts}V_{td}^*\frac{e}{16\pi^2}m_s(\bar{d}_R\sigma^{\mu\nu}s_L)F_{\mu\nu}$	$^{\mathrm{C}}$
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	$\frac{4G_F}{\sqrt{2}}V_{ts}V_{td}^*(\bar{d}_R s_L)(\bar{u}_L u_R)$	$\mathbf{C}$
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{4G_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	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}d_L)(\bar{\nu}_{\tau}\gamma_{\mu}(1-\gamma_5)\nu_{\mu})$	$\mathbf{C}$
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	$\frac{4\dot{G}_F}{\sqrt{2}}V_{td}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}d_R)(\bar{\nu}_{\mu}\gamma_{\mu}(1-\gamma_5)\nu_e)$	$\mathbf{C}$
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	$\frac{4G_F}{\sqrt{2}}V_{td}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^{\mu} d_R) (\bar{\nu}_e \gamma_{\mu} (1 - \gamma_5) \nu_{\tau})$	$\mathbf{C}$

#### 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	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R \nu_{eL})$	$\mathbf{C}$
CSL_suenue	$-\frac{4\widetilde{G}_F}{\sqrt{2}}V_{us}(\bar{u}_Rs_L)(\bar{e}_R\nu_{eL})$	$\mathbf{C}$
CT_suenue	$-rac{4ar{Q}_F}{\sqrt{2}}V_{us}(ar{u}_R\sigma^{\mu u}s_L)(ar{e}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_suenumu	$-rac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
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	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R \nu_{\mu L})$	$\mathbf{C}$
CSL_suenumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_Rs_L)(\bar{e}_R\nu_{\mu L})$	$\mathbf{C}$
CT_suenumu	$-rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_R\sigma^{\mu u}s_L)(ar{e}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_suenutau	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_suenutau	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_suenutau	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{e}_R  u_{ au L})$	$\mathbf{C}$
CSL_suenutau	$-rac{4\overset{\circ}{Q_F}}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{e}_R u_{ au L})$	$\mathbf{C}$
CT_suenutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu}s_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	C

#### 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	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_sumunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\mu}_R \nu_{eL})$	$\mathbf{C}$
CSL_sumunue	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{\mu}_R u_{eL})$	$\mathbf{C}$
CT_sumunue	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_R\sigma^{\mu u}s_L)(ar{\mu}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$
CVL_sumunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{\mu}_L\gamma_\mu  u_{\mu L})$	$\mathbf{C}$
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	$-rac{4ar{G}_F}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{\mu}_R  u_{\mu L})$	$\mathbf{C}$
CSL_sumunumu	$-rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
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	$-rac{4G_F}{\sqrt{2}}V_{us}(ar{u}_L\gamma^\mu s_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CVR_sumunutau	$-rac{4ar{G}_F^F}{\sqrt{2}}V_{us}(ar{u}_R\gamma^\mu s_R)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
CSR_sumunutau	$-rac{4ar{G}_F^F}{\sqrt{2}}V_{us}(ar{u}_L s_R)(ar{\mu}_R  u_{ au L})$	$\mathbf{C}$
CSL_sumunutau	$-rac{4G_F^c}{\sqrt{2}}V_{us}(ar{u}_Rs_L)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_sumunutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu}s_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

## 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	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{e}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{e}_R\nu_{eL})$	$\mathbf{C}$
CSL_duenue	$-\frac{4\overleftarrow{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_Rd_L)(\bar{e}_R\nu_{eL})$	$^{\mathrm{C}}$
CT_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{eL})$	$\mathbf{C}$
CVL_duenumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CVR_duenumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{e}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
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	$-rac{4G_F}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{e}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
CVL_duenutau	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{e}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
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	$-rac{4ar{Q}_F^2}{\sqrt{2}}V_{ud}(ar{u}_Ld_R)(ar{e}_R u_{ au L})$	$\mathbf{C}$
CSL_duenutau	$-rac{4\overset{\circ}{G_{F}}}{\sqrt{2}}V_{ud}(\bar{u}_{R}d_{L})(\bar{e}_{R} u_{ au L})$	$\mathbf{C}$
CT_duenutau	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	C

## ${\tt udmunu}$

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	$-rac{4G_F}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{\mu}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
CSR_dumunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\mu}_R u_{eL})$	$\mathbf{C}$
CSL_dumunue	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_Rd_L)(ar{\mu}_R u_{eL})$	$\mathbf{C}$
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	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\mu}_L\gamma_\mu  u_{\mu L})$	$\mathbf{C}$
CVR_dumunumu	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\gamma^\mu d_R)(ar{\mu}_L\gamma_\mu u_{\mu L})$	$\mathbf{C}$
CSR_dumunumu	$-\frac{4\tilde{G}_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\mu}_R\nu_{\mu L})$	$\mathbf{C}$
CSL_dumunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_Rd_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
CT_dumunumu	$-rac{4ar{G_F}}{\sqrt{2}}V_{ud}(ar{u}_R\sigma^{\mu u}d_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$\mathbf{C}$
${\tt CVL\_dumunutau}$	$-rac{4 ilde{G_F}}{\sqrt{2}}V_{ud}(ar{u}_L\gamma^\mu d_L)(ar{\mu}_L\gamma_\mu u_{ au L})$	$\mathbf{C}$
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	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_Ld_R)(\bar{\mu}_R u_{ au L})$	$\mathbf{C}$
CSL_dumunutau	$-rac{4G_F}{\sqrt{2}}V_{ud}(ar{u}_Rd_L)(ar{\mu}_R u_{ au L})$	$\mathbf{C}$
CT_dumunutau	$-\frac{4\overleftarrow{G_F}}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu}d_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\tau L})$	С

dF=0

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\overset{\circ}{G_F}}{\sqrt{2}}f^{ABC}\widetilde{G}_{\mu}^{A u}G_{ u}^{B ho}G_{ ho}^{C\mu}$	${ m R}$
C7_uu	$rac{4\overset{\circ}{G_F}}{\sqrt{2}}rac{e}{16\pi^2}m_uar{u}_L\sigma^{\mu u}u_RF_{\mu u}$	$\mathbf{C}$
C7_dd	$rac{4G_F}{\sqrt{2}}rac{e}{16\pi^2}m_dar{d}_L\sigma^{\mu u}d_RF_{\mu u}$	$\mathbf{C}$
C7_ss	$rac{4 ilde{G_F}}{\sqrt{2}}rac{e}{16\pi^2}m_sar{s}_L\sigma^{\mu u}s_RF_{\mu u}$	$\mathbf{C}$
C7_ee	$rac{4G_F}{\sqrt{2}}rac{e}{16\pi^2}m_ear{e}_L\sigma^{\mu u}e_RF_{\mu u}$	$\mathbf{C}$
C7_mumu	$\frac{4G_F}{\sqrt{2}}\frac{e}{16\pi^2}m_\muar{\mu}_L\sigma^{\mu\nu}\mu_RF_{\mu\nu}$	$\mathbf{C}$
C8_uu	$rac{4G_F^2}{\sqrt{2}}rac{g_s}{16\pi^2}m_uar{u}_L\sigma^{\mu u}T^Au_RG^A_{\mu u}$	$\mathbf{C}$
C8_dd	$rac{4ar{G}_F}{\sqrt{2}}rac{g_s}{16\pi^2}m_dar{d}_L\sigma^{\mu u}T^Ad_RG^A_{\mu u}$	$\mathbf{C}$
C8_ss	$\frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_s \bar{s}_L \sigma^{\mu\nu} T^A s_R G^A_{\mu\nu}$	$\mathbf{C}$
CTRR_eeuu	$rac{4G_F^2}{\sqrt{2}}(ar{e}_L\sigma^{\mu u}e_R)(ar{u}_L\sigma_{\mu u}u_R)$	$\mathbf{C}$
CTRR_mumuuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{\mu}_L\sigma^{\mu u}\mu_R)(\bar{u}_L\sigma_{\mu u}u_R)$	$\mathbf{C}$
CTRR_eedd	$rac{4ar{G_F}}{\sqrt{2}}(ar{e}_L\sigma^{\mu u}e_R)(ar{d}_L\sigma_{\mu u}d_R)$	$\mathbf{C}$
CTRR_eess	$rac{4ar{G}_F}{\sqrt{2}}(ar{e}_L\sigma^{\mu u}e_R)(ar{s}_L\sigma_{\mu u}s_R)$	$\mathbf{C}$
CTRR_mumudd	$rac{4 ar{G}_F}{\sqrt{2}} (ar{\mu}_L \sigma^{\mu u} \mu_R) (ar{d}_L \sigma_{\mu u} d_R)$	$\mathbf{C}$
CTRR_mumuss	$rac{4ar{G_F}}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{s}_L\sigma_{\mu u}s_R)$	$\mathbf{C}$
CS1RR_uuuu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(ar{u}_L u_R)(ar{u}_L u_R)$	$\mathbf{C}$
CS8RR_uuuu	$\frac{4\bar{G}_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{u}_L T^A u_R)$	$\mathbf{C}$
CS1RR_uudd	$rac{4G_F}{\sqrt{2}}(ar{u}_L u_R)(ar{d}_L d_R)$	$\mathbf{C}$
CS1RR_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L u_R)(\bar{s}_L s_R)$	$\mathbf{C}$
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	$\frac{4\bar{G}_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{s}_L T^A s_R)$	$\mathbf{C}$
CS1RR_dddd	$\frac{4G_F}{\sqrt{2}}(\bar{d}_Ld_R)(\bar{d}_Ld_R)$	$\mathbf{C}$
CS1RR_ddss	$rac{4reve{G_F}}{\sqrt{2}}(ar{d}_L d_R)(ar{s}_L s_R)$	$\mathbf{C}$
CS1RR_dssd	$rac{4 reve{G}_F^2}{\sqrt{2}} (ar{d}_L s_R) (ar{s}_L d_R)$	$\mathbf{C}$
CS1RR_ssss	$rac{4ar{G}_F}{\sqrt{2}}(ar{s}_L s_R)(ar{s}_L s_R)$	$\mathbf{C}$
CS8RR_dddd	$rac{4\overset{L}{G_F}}{\sqrt{2}}(ar{d}_LT^Ad_R)(ar{d}_LT^Ad_R)$	$\mathbf{C}$
CS8RR_ddss	$\frac{4G_F}{\sqrt{2}}(\bar{d}_L T^A d_R)(\bar{s}_L T^A s_R)$	$\mathbf{C}$
CS8RR_dssd	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}_L T^A s_R)(\bar{s}_L T^A d_R)}{\frac{4G_F}{\sqrt{2}}(\bar{s}_L T^A s_R)(\bar{s}_L T^A s_R)}$	$\mathbf{C}$
CS8RR_ssss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{s}_L T^A s_R)(\bar{s}_L T^A s_R)$	$\mathbf{C}$
CS1RR_uddu	$\frac{4\ddot{G}_{F}}{\sqrt{2}}(ar{u}_{L}d_{R})(ar{d}_{L}u_{R})$	$\mathbf{C}$
CS1RR_ussu	$rac{4ar{Q}_F^C}{\sqrt{2}}(ar{u}_L d_R)(ar{d}_L u_R) \ rac{4G_F}{\sqrt{2}}(ar{u}_L s_R)(ar{s}_L u_R)$	$\mathbf{C}$
CS8RR_uddu	$\frac{4G_F}{2}(\bar{\eta}_T T^A d_D)(d_T T^A \eta_D)$	$\mathbf{C}$
CS8RR_ussu	$rac{\sqrt{2}}{\sqrt{2}}(ar{u}_L T^A ar{u}_R)(ar{u}_L T^A ar{u}_R) \\ rac{4G_F}{\sqrt{2}}(ar{u}_L T^A ar{s}_R)(ar{s}_L T^A ar{u}_R) \\ rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{d}_R d_L)$	$\mathbf{C}$
CSRL_eedd	$4\ddot{G}_{F}(\bar{a}_{-}, a_{-})(\bar{d}_{-}, d_{-})$	$^{\mathrm{C}}$

$\begin{array}{c} \operatorname{CSRL\_eess} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{s}_Rs_L) & \operatorname{C} \\ \operatorname{CSRL\_eeuu} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{u}_Ru_L) & \operatorname{C} \\ \operatorname{CSRL\_mumudd} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{d}_Rd_L) & \operatorname{C} \\ \operatorname{CSRL\_mumuss} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{s}_Rs_L) & \operatorname{C} \\ \operatorname{CSRL\_mumuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{s}_Rs_L) & \operatorname{C} \\ \operatorname{CSRL\_mumuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{u}_Ru_L) & \operatorname{C} \\ \operatorname{CSRR\_eedd} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{d}_Ld_R) & \operatorname{C} \\ \operatorname{CSRR\_eeeumu} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{d}_Ld_R) & \operatorname{C} \\ \operatorname{CSRR\_eeeumuu} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{b}_L\mu_R) & \operatorname{C} \\ \operatorname{CSRR\_eeuu} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{b}_L\mu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuu} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{b}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuu} & \frac{4C_F}{4C_F}(\bar{e}_Le_R)(\bar{b}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4C_F}{4C_F}(\bar{e}_L\mu_R)(\bar{b}_Le_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{b}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{b}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{b}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4C_F}{4C_F}(\bar{\mu}_L\mu_R)(\bar{d}_Lr_\mu d_L) & \operatorname{R} \\ \operatorname{CV1LL\_uudd} & \frac{4C_F}{4C_F}(\bar{u}_Lr_R)(\bar{d}_Lr_\mu d_L) & \operatorname{R} \\ \operatorname{CV1LL\_uudd} & \frac{4C_F}{4C_F}(\bar{u}_Lr_R)(\bar{d}_Lr_\mu d_L) & \operatorname{R} \\ \operatorname{CV1LR\_ddd} & \frac{4C_F}{4C_F}(\bar{d}_Lr^\mu d_L)(\bar{d}_Rr_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_ddd} & \frac{4C_F}{4C_F}(\bar{d}_Lr^\mu d_L)(\bar{d}_Rr_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_dssd} & \frac{4C_F}{4C_F}(\bar{d}_Lr^\mu d_L)(\bar{d}_Rr_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_ssds} & \frac{4C_F}{4C_F}(\bar{d}_Lr^\mu d_L)(\bar{d}_Rr_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_ssuu} & \frac{4C_F}{4C_F}(\bar{d}_Lr^\mu d_L)(\bar{d}_Rr_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uusu} & \frac{4C_F}{4C_F}(\bar{d}_Lr^\mu d_L)(\bar{d}_Rr_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uusu} & \frac{4C_F}{4C_F}(\bar{u}_Lr^\mu u_L)(\bar{d}_Rr_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uusu} & \frac{4C_F}{4C_F}(\bar{u}_Lr^\mu u_L)(\bar{d}_Rr_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uuuu} & \frac{4C_F}{4C_F}(\bar{u}_Lr^\mu u_L$	WC name	Operator	Type
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRL_eess	$\frac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{s}_R s_L)$	C
$\begin{array}{c} \text{CSRL\_mumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Rs_L) & \text{C} \\ \text{CSRL\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Ru_L) & \text{C} \\ \text{CSRR\_eedd} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{d}_Ld_R) & \text{C} \\ \text{CSRR\_eeee} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{e}_Le_R) & \text{C} \\ \text{CSRR\_eemumu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_eemumu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_eess} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CSRR\_eeuu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CSRR\_emumue} & \frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_Le_R) & \text{C} \\ \text{CSRR\_mumudd} & \frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_Le_R) & \text{C} \\ \text{CSRR\_mumudu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \text{C} \\ \text{CSRR\_mumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{b}_Ls_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LL\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dsad} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu b_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_ssad} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_ssau} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd}$	CSRL_eeuu		$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRL_mumudd	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{d}_Rd_L)$	$\mathbf{C}$
$\begin{array}{c} \operatorname{CSRR\_eedd} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{d}_Ld_R) & \operatorname{C} \\ \operatorname{CSRR\_eeee} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{e}_Le_R) & \operatorname{C} \\ \operatorname{CSRR\_eemumu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{\mu}_L\mu_R) & \operatorname{C} \\ \operatorname{CSRR\_eemumu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{\mu}_L\mu_R) & \operatorname{C} \\ \operatorname{CSRR\_eess} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{u}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_eemumu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{\mu}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumue} & \frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_L\mu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \operatorname{C} \\ \operatorname{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \operatorname{C} \\ \operatorname{CSRR\_mumunu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Lu_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Lv_R) & \operatorname{C} \\ \operatorname{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Lv_R) & \operatorname{C} \\ \operatorname{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \operatorname{R} \\ \operatorname{CV1LL\_dudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \operatorname{R} \\ \operatorname{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \operatorname{R} \\ \operatorname{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{C} \\ \operatorname{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uuudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \operatorname{R} \\ \operatorname{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu $	CSRL_mumuss	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Rs_L)$	$\mathbf{C}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRL_mumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Ru_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CSRR\_eemumu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_eess} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{s}_Ls_R) & \text{C} \\ \text{CSRR\_eeuu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CSRR\_emumue} & \frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_Le_R) & \text{C} \\ \text{CSRR\_mumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \text{C} \\ \text{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Ls_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Ls_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_L\gamma_{\mu}d_L) & \text{R} \\ \text{CV1LL\_ddd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_L\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_ddso} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{u}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_dsod} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}d_R) & \text{C} \\ \text{CV1LR\_ssod} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}s_L)(\bar{d}_R\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_ssou} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{d}_R\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) $	CSRR_eedd	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{d}_L d_R)$	$\mathbf{C}$
$\begin{array}{c} \text{CSRR\_eess} & \frac{4G_F}{\sqrt{2}} (\bar{e}_L e_R) (\bar{s}_L s_R) \\ \text{CSRR\_eeuu} & \frac{4G_F}{\sqrt{2}} (\bar{e}_L e_R) (\bar{u}_L u_R) \\ \text{CSRR\_emumue} & \frac{4G_F}{\sqrt{2}} (\bar{e}_L \mu_R) (\bar{\mu}_L e_R) \\ \text{CSRR\_mumudd} & \frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{d}_L d_R) \\ \text{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{\mu}_L \mu_R) \\ \text{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{\mu}_L \mu_R) \\ \text{CSRR\_mumuuss} & \frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_R) \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_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\_uuss} & \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_L \gamma_\mu d_R) \\ \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\_dssd} & \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 s_L) (\bar{s}_R \gamma_\mu s_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\_ssuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}_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\_ussu} & \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 d_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\_uuss} & \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\_uuss} & \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu d_R) \\ \text{CV1LR\_uusu} & \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_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{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) \\ \end{array}$	CSRR_eeee	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{e}_L e_R)$	$\mathbf{C}$
$\begin{array}{c} \text{CSRR\_eeuu} & \frac{4G_F}{\sqrt{2}}(\bar{e}_Le_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CSRR\_emumue} & \frac{4G_F}{\sqrt{2}}(\bar{e}_L\mu_R)(\bar{\mu}_Le_R) & \text{C} \\ \text{CSRR\_mumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{d}_Ld_R) & \text{C} \\ \text{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_mumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_L) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & $	CSRR_eemumu	$rac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{\mu}_L \mu_R)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CSRR_eess	$\frac{4G_F}{\sqrt{2}}(ar{e}_L e_R)(ar{s}_L s_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CSRR\_mumudd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{d}_L d_R) & \text{C} \\ \text{CSRR\_mumumumu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{\mu}_L \mu_R) & \text{C} \\ \text{CSRR\_mumuss} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L \mu_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{\mu}_L \mu_R) (\bar{u}_L u_R) & \text{C} \\ \text{CV1LL\_uudd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_L \gamma_\mu d_L) & \text{R} \\ \text{CV1LL\_uuss} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{s}_L \gamma_\mu s_L) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{s}_R \gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{u}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_ddsu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu d_L) (\bar{u}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssss} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{s}_L \gamma^\mu s_L) (\bar{s}_R \gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uddu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu d_L) (\bar{d}_R \gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{d}_R \gamma_\mu u_R) & \text{R} \\ \end{array}$	CSRR_eeuu	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L e_R)(\bar{u}_L u_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CSRR\_mumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{\mu}_L\mu_R) & \text{C} \\ \text{CSRR\_mumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Ls_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ddsu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_uussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu a_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu a_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uuudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu a_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu a_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) & \text{R} \\ \end{array}$	CSRR_emumue	$rac{4G_F}{\sqrt{2}}(ar{e}_L\mu_R)(ar{\mu}_Le_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CSRR\_mumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{s}_Ls_R) & \text{C} \\ \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_L\gamma_{\mu}d_L) & \text{R} \\ \text{CV1LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{s}_L\gamma_{\mu}s_L) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{s}_R\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{s}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{u}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}d_L)(\bar{u}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}d_R) & \text{C} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}d_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{R} \\ \text{CV1LR\_uuuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) & \text{R}$	CSRR_mumudd	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{d}_Ld_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CSRR\_mumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R) & \text{C} \\ \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) & \text{R} \\ \text{CV1LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ddsu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)($	CSRR_mumumumu	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{\mu}_L\mu_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CV1LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_L\gamma_\mu d_L) \\ \text{CV1LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \\ \text{CV1LR\_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \\ \end{array}$	CSRR_mumuss	$rac{4G_F}{\sqrt{2}}(ar{\mu}_L\mu_R)(ar{s}_Ls_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CV1LL\_uuss} & \frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_L\gamma_\mu s_L) & \text{R} \\ \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \end{array}$	CSRR_mumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\mu_R)(\bar{u}_Lu_R)$	$^{\mathrm{C}}$
$\begin{array}{c} \text{CV1LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \end{array}$	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{AG_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uuudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \end{array} \\ \end{array}$	CV1LL_uuss	$rac{4G_F}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{s}_L\gamma_\mu s_L)$	${ m R}$
CV1LR_dduu $\frac{AG_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$ CV1LR_dssd $\frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) \qquad \qquad C$ CV1LR_ssdd $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad R$ CV1LR_ssss $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad R$ CV1LR_ssuu $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$ CV1LR_uddu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \qquad \qquad C$ CV1LR_ussu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \qquad \qquad C$ CV1LR_uussu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad C$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad R$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$	CV1LR_dddd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{d}_R\gamma_\mu d_R)$	${ m R}$
$\begin{array}{c} \text{CV1LR\_dssd} & \frac{\sqrt{4}G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu d_R) & \text{C} \\ \text{CV1LR\_ssdd} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_ssss} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_ssuu} & \frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \text{CV1LR\_uddu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_ussu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) & \text{C} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) & \text{R} \\ \text{CV1LR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV1LR\_uuuu} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) & \text{R} \\ \end{array}$	CV1LR_ddss	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{s}_R\gamma_\mu s_R)$	${ m R}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CV1LR_dduu	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{u}_R\gamma_\mu u_R)$	${ m R}$
CV1LR_ssss $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}s_R) \qquad \qquad R$ CV1LR_ssuu $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{u}_R\gamma_{\mu}u_R) \qquad \qquad R$ CV1LR_uddu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}d_L)(\bar{d}_R\gamma_{\mu}u_R) \qquad \qquad C$ CV1LR_ussu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}s_L)(\bar{s}_R\gamma_{\mu}u_R) \qquad \qquad C$ CV1LR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}d_R) \qquad \qquad R$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{s}_R\gamma_{\mu}s_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{u}_R\gamma_{\mu}u_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{u}_R\gamma_{\mu}u_R) \qquad \qquad R$	CV1LR_dssd	$rac{4G_F}{\sqrt{2}}(ar{d}_L\gamma^\mu s_L)(ar{s}_R\gamma_\mu d_R)$	$^{\mathrm{C}}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CV1LR_ssdd	$rac{4G_F}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{d}_R\gamma_\mu d_R)$	${ m R}$
CV1LR_uddu $\frac{\sqrt{G_F}}{\sqrt{2}}(\bar{u}_L\gamma^\mu d_L)(\bar{d}_R\gamma_\mu u_R) \qquad \qquad C$ CV1LR_ussu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \qquad \qquad C$ CV1LR_udd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad R$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$ CV1R_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$	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 $\frac{4\widetilde{G}_F^*}{\sqrt{2}}(\bar{u}_L\gamma^\mu s_L)(\bar{s}_R\gamma_\mu u_R) \qquad \qquad C$ CV1LR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad R$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$ CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \qquad \qquad R$	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 $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu d_R) \qquad \qquad R$ CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R) \qquad \qquad R$ CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{d}_R\gamma_\mu u_R) \qquad \qquad R$	CV1LR_uddu	$rac{4G_F}{\sqrt{2}}(ar{u}_L\gamma^\mu d_L)(ar{d}_R\gamma_\mu u_R)$	$^{\mathrm{C}}$
CV1LR_uuss $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{s}_R\gamma_{\mu}s_R) \qquad \qquad R$ CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}u_L)(\bar{u}_R\gamma_{\mu}u_R) \qquad \qquad R$ CV1RR_uudd $\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}u_L)(\bar{d}_R\gamma_{\mu}u_R) \qquad \qquad R$	CV1LR_ussu	$\frac{4G_F}{\sqrt{2}}(ar{u}_L\gamma^\mu s_L)(ar{s}_R\gamma_\mu u_R)$	$^{\mathrm{C}}$
CV1LR_uuuu $\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_R\gamma_\mu u_R)$ R	CV1LR_uudd	$rac{4G_F}{\sqrt{2}}(ar{u}_L\gamma^\mu u_L)(ar{d}_R\gamma_\mu d_R)$	$\mathbf{R}$
$4\tilde{G}F(\bar{z}, a, b, c)(\bar{d}, c, d)$	CV1LR_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{s}_R\gamma_\mu s_R)$	${ m R}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CV1LR_uuuu		${ m R}$
$\begin{array}{cccc} \text{CV1RR\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_R\gamma^\mu u_R)(\bar{s}_R\gamma_\mu s_R) & \text{R} \\ \text{CV8LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CV8LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) & \text{R} \\ \text{CV8LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{d}_R\gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R) & \text{C} \\ \end{array}$	CV1RR_uudd	$rac{4 G_F}{\sqrt{2}} (ar{u}_R \gamma^\mu u_R) (ar{d}_R \gamma_\mu d_R)$	$\mathbf{R}$
$\begin{array}{cccc} \text{CV8LL\_uudd} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{d}_L\gamma_\mu T^A d_L) & \text{R} \\ \text{CV8LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) & \text{R} \\ \text{CV8LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{d}_R\gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R) & \text{C} \\ \end{array}$	CV1RR_uuss	$rac{4G_F}{\sqrt{2}}(ar{u}_R\gamma^\mu u_R)(ar{s}_R\gamma_\mu s_R)$	R
$\begin{array}{cccc} \text{CV8LL\_uuss} & \frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu T^A u_L)(\bar{s}_L\gamma_\mu T^A s_L) & \text{R} \\ \text{CV8LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{d}_R\gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R) & \text{C} \\ \end{array}$	CV8LL_uudd	$rac{4G_F}{\sqrt{2}}(ar{u}_L\gamma^\mu T^A u_L)(ar{d}_L\gamma_\mu T^A d_L)$	R
$\begin{array}{lll} \text{CV8LR\_dddd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{d}_R\gamma_\mu T^A d_R) & \text{R} \\ \text{CV8LR\_ddss} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{s}_R\gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR\_dduu} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR\_dssd} & \frac{4G_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R) & \text{C} \end{array}$	CV8LL_uuss	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_L\gamma_{\mu}T^As_L)$	R
$\begin{array}{ll} \text{CV8LR\_ddss} & \frac{4 \overline{G}_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu T^A d_L) (\bar{s}_R \gamma_\mu T^A s_R) & \text{R} \\ \text{CV8LR\_dduu} & \frac{4 G_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu T^A d_L) (\bar{u}_R \gamma_\mu T^A u_R) & \text{R} \\ \text{CV8LR\_dssd} & \frac{4 G_F}{\sqrt{2}} (\bar{d}_L \gamma^\mu T^A s_L) (\bar{s}_R \gamma_\mu T^A d_R) & \text{C} \end{array}$	CV8LR_dddd	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^Ad_L)(\bar{d}_R\gamma_\mu T^Ad_R)$	R
CV8LR_dduu $ \frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_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) \qquad \qquad \text{C} $	CV8LR_ddss	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^Ad_L)(\bar{s}_R\gamma_\mu T^As_R)$	R
CV8LR_dssd $\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R)$ C	CV8LR_dduu	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A d_L)(\bar{u}_R\gamma_\mu T^A u_R)$	R
	CV8LR_dssd	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu T^A s_L)(\bar{s}_R\gamma_\mu T^A d_R)$	$\mathbf{C}$

WC name	Operator	Type
CV8LR_ssdd	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{d}_R\gamma_\mu T^A d_R)$	R
CV8LR_ssss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}T^As_L)(\bar{s}_R\gamma_{\mu}T^As_R)$	R
CV8LR_ssuu	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{s}_L\gamma^\mu T^A s_L)(\bar{u}_R\gamma_\mu T^A u_R)$	R
CV8LR_uddu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Ad_L)(\bar{d}_R\gamma_{\mu}T^Au_R)$	$\mathbf{C}$
CV8LR_ussu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^As_L)(\bar{s}_R\gamma_{\mu}T^Au_R)$	$\mathbf{C}$
CV8LR_uudd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{d}_R\gamma_{\mu}T^Ad_R)$	$\mathbf{R}$
CV8LR_uuss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{s}_R\gamma_{\mu}T^As_R)$	$\mathbf{R}$
CV8LR_uuuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^{\mu}T^Au_L)(\bar{u}_R\gamma_{\mu}T^Au_R)$	R
CV8RR_uudd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{d}_R\gamma_{\mu}T^Ad_R)$	R
CV8RR_uuss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_R\gamma^{\mu}T^Au_R)(\bar{s}_R\gamma_{\mu}T^As_R)$	$\mathbf{R}$
CVLL_dddd	$\frac{4\widetilde{Q}_F^2}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{d}_L\gamma_\mu d_L)$	$\mathbf{R}$
CVLL_ddss	$rac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{d}_L\gamma^\mu d_L)(ar{s}_L\gamma_\mu s_L)$	$\mathbf{R}$
CVLL_dssd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{d}_L\gamma^\mu s_L)(ar{s}_L\gamma_\mu d_L)$	${ m R}$
CVLL_eedd	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{e}_L\gamma^\mu e_L)(\bar{d}_L\gamma_\mu d_L)$	${ m R}$
CVLL_eeee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{e}_L\gamma_{\mu}e_L)$	$\mathbf{R}$
CVLL_eemumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{\mu}_L\gamma_{\mu}\mu_L)$	$\mathbf{R}$
CVLL_eess	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{s}_L\gamma_{\mu}s_L)$	R
CVLL_eeuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{u}_L\gamma_{\mu}u_L)$	R
CVLL_mumudd	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{d}_L\gamma_\mu d_L)$	R
CVLL_mumumumu	$\frac{4\tilde{G_F}}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{\mu}_L\gamma_\mu\mu_L)$	R
CVLL_mumuss	$\frac{4\tilde{G_F}}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{s}_L\gamma_\mu s_L)$	R
CVLL_mumuuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{u}_L\gamma_\mu u_L)$	R
CVLL_ssss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{s}_L\gamma^\mu s_L)(\bar{s}_L\gamma_\mu s_L)$	R
CVLL_uuuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{u}_L\gamma_\mu u_L)$	R
CVLR_ddee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{e}_R\gamma_\mu e_R)$	R
CVLR_ddmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}_L\gamma^\mu d_L)(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_eedd	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{d}_R\gamma_{\mu}d_R)$	R
CVLR_eeee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{e}_R\gamma_{\mu}e_R)$	R
CVLR_eemumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{\mu}_R\gamma_{\mu}\mu_R)$	R
CVLR_eess	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{s}_R\gamma_{\mu}s_R)$	R
CVLR_eeuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{u}_R\gamma_{\mu}u_R)$	R
CVLR_emumue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\gamma^\mu\mu_L)(\bar{\mu}_R\gamma_\mu e_R)$	$^{\mathrm{C}}$
CVLR_mumudd	$rac{4ar{G_F}}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{d}_R\gamma_\mu d_R)$	${ m R}$
CVLR_mumuee	$rac{4ar{G_F}}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{e}_R\gamma_\mu e_R)$	${ m R}$
CVLR_mumumumu	$rac{4ar{G_F}}{\sqrt{2}}(ar{\mu}_L\gamma^\mu\mu_L)(ar{\mu}_R\gamma_\mu\mu_R)$	${ m R}$
CVLR_mumuss	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{s}_R\gamma_{\mu}s_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}e_L)(\bar{u}_R\gamma_{\mu}u_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{e}_L\gamma^{\mu}\mu_L)(\bar{\mu}_R\gamma_{\mu}e_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{d}_R\gamma_{\mu}d_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{e}_R\gamma_{\mu}e_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{e}_R\gamma_{\mu}e_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{\mu}_R\gamma_{\mu}\mu_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{s}_R\gamma_{\mu}s_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{u}_R\gamma_{\mu}u_R) \\ \frac{4G_F}{\sqrt{2}}(\bar{\mu}_L\gamma^{\mu}\mu_L)(\bar{u}_R\gamma_{\mu}u_R) \\ \end{aligned}$	${ m R}$
CVLR_mumuuu	$\frac{4\check{G}_F}{\bar{G}}(\bar{\mu}_L\gamma^\mu\mu_L)(\bar{u}_R\gamma_\mu u_R)$	R

WC name	Operator	Type
CVLR_ssee	$\frac{4G_F}{\sqrt{2}}(\bar{s}_L\gamma^{\mu}s_L)(\bar{e}_R\gamma_{\mu}e_R)$	R
CVLR_ssmumu	$rac{4ar{G}_F}{\sqrt{2}}(ar{s}_L\gamma^\mu s_L)(ar{\mu}_R\gamma_\mu\mu_R)$	R
CVLR_uuee	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{u}_L \gamma^\mu u_L) (\bar{e}_R \gamma_\mu e_R)$	R
CVLR_uumumu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}_L\gamma^\mu u_L)(\bar{\mu}_R\gamma_\mu\mu_R)$	R
CVRR_dddd	$\frac{4 \check{G}_F}{\sqrt{2}} (\bar{d}_R \gamma^\mu d_R) (\bar{d}_R \gamma_\mu d_R)$	R
CVRR_ddss	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}_R\gamma^\mu d_R)(\bar{s}_R\gamma_\mu s_R)$	R
CVRR_dssd	$rac{4ar{G}_F}{\sqrt{2}}(ar{d}_R\gamma^\mu s_R)(ar{s}_R\gamma_\mu d_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	$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{4reve{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	$\frac{4G_F}{\sqrt{2}}(\bar{\mu}_R\gamma^\mu\mu_R)(\bar{u}_R\gamma_\mu u_R)$	R
CVRR_ssss	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{s}_R \gamma^\mu s_R) (\bar{s}_R \gamma_\mu s_R)$	R
CVRR_uuuu	$rac{4\widetilde{G_F}}{\sqrt{2}}(ar{u}_R\gamma^\mu u_R)(ar{u}_R\gamma_\mu u_R)$	R

### mue

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

WC name	Operator	Type
CVLR_muedd	$(\bar{e}_L \gamma^\mu \mu_L) (\bar{d}_R \gamma_\mu d_R)$	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	$(ar{d}_L \gamma^\mu d_L) (ar{e}_R \gamma_\mu \mu_R)$	C
CVLR_ssmue	$(ar{s}_L \gamma^\mu s_L) (ar{e}_R \gamma_\mu \mu_R)$	$^{\mathrm{C}}$
CSRL_mueuu	$(ar{e}_L\mu_R)(ar{u}_Ru_L)$	$^{\mathrm{C}}$
CSRL_emuuu	$(ar{\mu}_L e_R)(ar{u}_R u_L)$	$^{\mathrm{C}}$
CSRL_muedd	$(ar{e}_L \mu_R) (ar{d}_R d_L)$	$^{\mathrm{C}}$
CSRL_muess	$(ar{e}_L\mu_R)(ar{s}_Rs_L)$	$\mathbf{C}$
CSRL_emudd	$(ar{\mu}_L e_R)(ar{d}_R d_L)$	$^{\mathrm{C}}$
CSRL_emuss	$(ar{\mu}_L e_R)(ar{s}_R s_L)$	$\mathbf{C}$
CSRR_eemue	$(ar{e}_L e_R)(ar{e}_L \mu_R)$	$\mathbf{C}$
CSRR_eeemu	$(ar{e}_L e_R)(ar{\mu}_L e_R)$	$\mathbf{C}$
CSRR_muemumu	$(ar{e}_L\mu_R)(ar{\mu}_L\mu_R)$	$\mathbf{C}$
CSRR_emumumu	$(ar{\mu}_L e_R)(ar{\mu}_L \mu_R)$	$^{\mathrm{C}}$
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	$(\bar{e}_L \sigma^{\mu\nu} \mu_R)(\bar{u}_L \sigma_{\mu\nu} u_R)$	$^{\mathrm{C}}$
CTRR_emuuu	$(\bar{\mu}_L \sigma^{\mu  u} e_{\underline{R}}) (\bar{u}_L \sigma_{\mu  u} u_R)$	$^{\mathrm{C}}$
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	$(ar{\mu}_L e_R)(ar{d}_L d_R)$	$\mathbf{C}$
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	$(ar{e}_L\sigma^{\mu u}\mu_R)(ar{s}_L\sigma_{\mu u}s_R)$	$^{\mathrm{C}}$
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	$(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_{L}\gamma_{\mu}\mu_{L})$	С
CVLL_numunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_numunuemue	$(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_{L}\gamma_{\mu}\mu_{L})$	$^{\mathrm{C}}$
CVLL_numunumumue	$(\bar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (\bar{e}_L \gamma_{\mu} \mu_L)$	$^{\mathrm{C}}$
CVLL_nutaunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{ au L})(\bar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_nutaunuemue	$(\bar{\nu}_{eL}\gamma^{\mu} u_{\tau L})(\bar{e}_{L}\gamma_{\mu}\mu_{L})$	$^{\mathrm{C}}$
CVLL_nutaunumuemu	$a(\bar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(\bar{\mu}_{L}\gamma_{\mu}e_{L})$	$^{\mathrm{C}}$
CVLL_nutaunumumue	$e\left(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L} ight)\!\left(ar{e}_{L}\gamma_{\mu}\mu_{L} ight)$	$^{\mathrm{C}}$
CVLL_nutaunutaumu	$\det[ar{ u}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{e}_L \gamma_{\mu} \mu_L)$	$^{\mathrm{C}}$
CVLR_nuenuemue	$(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_R\gamma_{\mu}\mu_R)$	$^{\mathrm{C}}$
CVLR_numunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{\mu}_{R}\gamma_{\mu}e_{R})$	$^{\mathrm{C}}$

WC name	Operator	Type
CVLR_numunuemue	$(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_R\gamma_{\mu}\mu_R)$	С
CVLR_numunumumue	$(ar{ u}_{\mu L} \gamma^{\mu}  u_{\mu L}) (ar{e}_R \gamma_{\mu} \mu_R)$	$\mathbf{C}$
CVLR_nutaunueemu	$(\bar{ u}_{eL}\gamma^{\mu} u_{\tau L})(\bar{\mu}_{R}\gamma_{\mu}e_{R})$	$\mathbf{C}$
CVLR_nutaunuemue	$(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_R\gamma_{\mu}\mu_R)$	$\mathbf{C}$
CVLR_nutaunumuemu	$1 \left( ar{ u}_{\mu L} \gamma^{\mu}  u_{ au L} \right) \left( ar{\mu}_R \gamma_{\mu} e_R \right)$	$\mathbf{C}$
CVLR_nutaunumumue	$e\left(ar{ u}_{\mu L}\gamma^{\mu} u_{ au L} ight)(ar{e}_{R}\gamma_{\mu}\mu_{R})$	$\mathbf{C}$
CVLR_nutaunutaum	$\det[ar{ u}_{ au L} \gamma^{\mu}  u_{ au L}) (ar{e}_R \gamma_{\mu} \mu_R)$	$\mathbf{C}$

## ${\tt ffnunu}$

$\begin{array}{c} \text{CVLL\_nuenuedd} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{d}_L\gamma_{\mu}d_L) & \text{R} \\ \text{CVLL\_nuenueee} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_L\gamma_{\mu}e_L) & \text{R} \\ \text{CVLL\_nuenuemumu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_L\gamma_{\mu}\mu_L) & \text{R} \\ \text{CVLL\_nuenuess} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_L\gamma_{\mu}\mu_L) & \text{R} \\ \text{CVLL\_nuenueuu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{d}_L\gamma_{\mu}u_L) & \text{R} \\ \text{CVLL\_nuenumudd} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_nuenumumu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_nuenumumu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{\mu}_L\gamma_{\mu}\mu_L) & \text{C} \\ \text{CVLL\_nuenumumu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{\mu}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_nuenumunu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{u}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_nuenutaudd} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}d_L) & \text{C} \\ \text{CVLL\_nuenutaudd} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}d_L) & \text{C} \\ \text{CVLL\_nuenutaumum} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L) & \text{C} \\ \text{CVLL\_nuenutaumum} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{G_F}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunumudd} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{R} \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{R} \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutauud} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutauum} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{G_F}(\bar{\nu}_{\mu}L\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ $	WC name	Operator	Type
$\begin{array}{llllllllllllllllllllllllllllllllllll$	CVLL_nuenuedd	$\frac{4G_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{d}_L\gamma_{\mu}d_L)$	R
$\begin{array}{c} \text{CVLL\_nuenuess} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{eL}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_nuenueuu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{eL}) (\bar{u}_L \gamma_{\mu} u_L) \\ \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{eL}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_nuenumudd} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\mu L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L) \\ \text{CVLL\_nuenumumumu} \\ \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\mu L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) \\ \text{CVLL\_nuenumuss} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_nuenumuuu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_nuenutaudd} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_nuenutaumumu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_nuenutaumumu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) \\ \text{CVLL\_nuenutauss} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) \\ \text{CVLL\_nuenutauuuu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunutauumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_numunutauus} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_numunutauus} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} u_L) \\ \text{CCULL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} u_L) \\ \text{CCULL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L$	CVLL_nuenueee	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_L\gamma_{\mu}e_L)$	R
$\begin{array}{c} \text{CVLL\_nuenueuu} & \frac{4G_F^2}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{eL}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_nuenumudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_nuenumuee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_nuenumumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_nuenumuss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_nuenumuuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_nuenutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_nuenutauee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_nuenutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu e_L) \\ \text{CVLL\_nuenutauuss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutauue} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutauumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutauumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_$	CVLL_nuenuemumu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{\mu}_L\gamma_{\mu}\mu_L)$	R
$\begin{array}{c} \text{CVLL\_nuenumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}d_L) \\ \text{CVLL\_nuenumuee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_nuenumumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_nuenumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_nuenumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L) \\ \text{CVLL\_nuenutaude} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_nuenutaumum} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_nuenutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_numunutaumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CCVLL\_numunutauu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CCVLL\_numunutauu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) \\ CCV$	CVLL_nuenuess	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{s}_L\gamma_{\mu}s_L)$	${ m R}$
$\begin{array}{c} \text{CVLL\_nuenumuee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_nuenumumum} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{\mu}_L\gamma_{\mu}\mu_L) \\ \text{CVLL\_nuenumuss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{s}_L\gamma_{\mu}s_L) \\ \text{CVLL\_nuenumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{u}_L\gamma_{\mu}u_L) \\ \text{CVLL\_nuenutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L) \\ \text{CVLL\_nuenutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_nuenutaumum} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{\mu}_L\gamma_{\mu}\mu_L) \\ \text{CVLL\_nuenutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}d_L) \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{\nu}_L\gamma_{\mu}\mu_L) \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{s}_L\gamma_{\mu}s_L) \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{\sigma}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{\sigma}_L\gamma_{\mu}u_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\sigma}_L\gamma_{\mu}d_L) \\ \text{CVLL\_numunutauuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\sigma}_L\gamma_{\mu}d_L) \\ \text{CVLL\_numunutauuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\sigma}_L\gamma_{\mu}a_L) \\ \text{CVLL\_numunutauuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\sigma}_L\gamma_{\mu}a_L) \\ \text{CVLL\_numunutauuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\sigma}_L\gamma_{\mu}a_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\sigma}_L\gamma_{\mu}a_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}$	CVLL_nuenueuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{u}_L\gamma_{\mu}u_L)$	${ m R}$
$\begin{array}{c} \text{CVLL\_nuenumumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\mu L}) (\bar{\mu}_L \gamma_\mu \mu_L) \\ \bar{\nu}_L (\bar{\nu}_L \gamma_\mu \nu_L) (\bar{\nu}_L \gamma_\mu \nu_L) \\ \bar{\nu}_L (\bar{\nu}_L \gamma_\mu \nu_L) \\ \bar{\nu}_L (\bar{\nu}_L \gamma_\mu \nu_L) \\ \bar{\nu}_L (\bar{\nu}_L \gamma_\mu \nu_L) (\bar{\nu}_L \gamma_\mu \nu_L) \\ \bar{\nu}_L (\bar{\nu}_L \gamma_\mu \nu_L) \\ \bar{\nu}_L (\bar{\nu}_L \gamma_\mu \nu_L) \\ \bar{\nu}_L ($	CVLL_nuenumudd	$\frac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{d}_L\gamma_\mu d_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenumuss} & \frac{4G_F^c}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\mu L})(\bar{s}_L\gamma_\mu s_L) \\ \text{CVLL\_nuenumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\mu L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_nuenutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_nuenutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu e_L) \\ \text{CVLL\_nuenutaumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{\mu}_L\gamma_\mu \mu_L) \\ \text{CVLL\_nuenutaumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{s}_L\gamma_\mu u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{e}_L\gamma_\mu e_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{s}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu u_L) \\ \text{CVLL\_numunutausu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu u_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & 4G$	CVLL_nuenumuee	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\mu L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_nuenutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_nuenutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu e_L) \\ \text{CVLL\_nuenutaumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{\mu}_L\gamma_\mu \mu_L) \\ \text{CVLL\_nuenutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^\mu\nu_{\tau L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumumue} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{\mu}_L\gamma_\mu \mu_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{\mu}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{u}_L\gamma_\mu u_L) \\ \text{CVLL\_numunumuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\mu L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunutaude} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{d}_L\gamma_\mu d_L) \\ \text{CVLL\_numunutaumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu e_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu u_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu u_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^\mu\nu_{\tau L})(\bar{e}_L\gamma_\mu u_L) \\ \end{array}$	${\tt CVLL\_nuenumumumu}$	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{\mu}_L\gamma_\mu\mu_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenutaudd} & \frac{4 \overline{G_F}}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) & \text{C} \\ \text{CVLL\_nuenutauee} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_nuenutaumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) & \text{C} \\ \text{CVLL\_nuenutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) & \text{C} \\ \text{CVLL\_nuenutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVLL\_numunumudd} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{d}_L \gamma_{\mu} d_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{s}_L \gamma_{\mu} s_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) & \text{R} \\ \text{CVLL\_numunutaudd} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) & \text{C} \\ \text{CVLL\_numunutauee} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutaumum} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutausu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutausu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{\nu}_{\mu} \nu_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & $	CVLL_nuenumuss	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{s}_L\gamma_\mu s_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenutauee} & \frac{4 \widetilde{G_F}}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_nuenutaumunu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) & \text{C} \\ \text{CVLL\_nuenutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) & \text{C} \\ \text{CVLL\_nuenutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVLL\_numunumudd} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{d}_L \gamma_{\mu} d_L) & \text{R} \\ \text{CVLL\_numunumumuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{R} \\ \text{CVLL\_numunumumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} \mu_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{s}_L \gamma_{\mu} s_L) & \text{R} \\ \text{CVLL\_numunutaudd} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \\ \text{CVLL\_numunutauee} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) & \text{C} \\ \text{CVLL\_numunutaueumu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutaumum} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutausu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4 G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{\nu}_{\mu} \nu_{\tau L}) (\bar{\nu}_{\mu} \nu_{\tau L}) & \text{C}$	CVLL_nuenumuuu	$rac{4G_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{\mu L})(ar{u}_L\gamma_\mu u_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenutaumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) \\ \text{CVLL\_nuenutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_numunumuee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{e}_L \gamma_{\mu} e_L) \\ \text{CVLL\_numunumumus} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\mu L}) (\bar{u}_L \gamma_{\mu} u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{d}_L \gamma_{\mu} d_L) \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L) \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{e}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) \\ \text{CCVL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{\nu}_{\mu} \gamma_{\mu} s_L) \\ \text{CCVL\_numunutauuu} & 4G$	CVLL_nuenutaudd	$\frac{4G_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{\tau L})(\bar{d}_L\gamma_{\mu}d_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_numunumude} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_numunumumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_numunumumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{e}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\sigma}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\sigma}_L \gamma_\mu s_L) \\ \text{CCVL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\sigma}_L \gamma_\mu s_L) \\ \text{CCVL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\sigma}_L \gamma_\mu s_L) \\ \text{CCVL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} ($	CVLL_nuenutauee	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_nuenutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{eL} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_numunumude} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_numunumumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{\mu}_L \gamma_\mu \mu_L) \\ \text{CVLL\_numunumumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunumuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{d}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\mu}_L \gamma_\mu \mu_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CCVLL\_numunutauuu} & CC \\ \text{CVLL\_numunutauuu} & CC \\ \text{CVLC\_numunutauuu} & CC \\ \text{CVLC\_numunutauuu} & CC \\ \text{CVLC\_numunutauuuu} & CC \\ \text{CVLC\_numunutauuuu} & CC \\ \text{CVLC\_numunutauuuu} & CC \\ \text{CVLC\_numunutauuuu} & CC \\ $	CVLL_nuenutaumumu	$4\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{\mu}_L\gamma_{\mu}\mu_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_numunumudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{d}_L\gamma_{\mu}d_L) & \text{R} \\ \text{CVLL\_numunumuee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{e}_L\gamma_{\mu}e_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{\mu}_L\gamma_{\mu}\mu_L) & \text{R} \\ \text{CVLL\_numunumumus} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{s}_L\gamma_{\mu}s_L) & \text{R} \\ \text{CVLL\_numunumunu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_L\gamma_{\mu}u_L) & \text{R} \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L) & \text{C} \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) & \text{C} \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}u_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) & \text{C} \\ \end{array}$	CVLL_nuenutauss	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L)$	$\mathbf{C}$
$\begin{array}{lll} \text{CVLL\_numunumuee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{e}_L \gamma_\mu e_L) & \text{R} \\ \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{\mu}_L \gamma_\mu \mu_L) & \text{R} \\ \text{CVLL\_numunumuss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{s}_L \gamma_\mu s_L) & \text{R} \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) & \text{R} \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu d_L) & \text{C} \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{e}_L \gamma_\mu e_L) & \text{C} \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\mu}_L \gamma_\mu \mu_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) & \text{C} \\ \text{CVLL\_numunutausu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) & \text{C} \\ \end{array}$	CVLL_nuenutauuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L)$	$\mathbf{C}$
$\begin{array}{c} \text{CVLL\_numunumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{\mu}_L \gamma_\mu \mu_L) \\ \text{CVLL\_numunumuss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunumuuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\mu L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CVLL\_numunutaudd} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{d}_L \gamma_\mu d_L) \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{e}_L \gamma_\mu e_L) \\ \text{CVLL\_numunutaumumu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{\mu}_L \gamma_\mu \mu_L) \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunutausu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{s}_L \gamma_\mu s_L) \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^\mu \nu_{\tau L}) (\bar{u}_L \gamma_\mu u_L) \\ \text{CCVLL\_numunutauuu} & \text{CCVLL\_numunutauuu} \\ \text{CCVLL\_numunutauuu} & \text{CCVLL\_numunutauuuu} \\ \text{CCVLL\_numunutauuuu} & \text{CCVLL\_numunutauuuu} \\ \text{CCVLL\_numunutauuuu} \\ \text{CCVLL\_numunutauuuu} & \text{CCVLL\_numunutauuuu} \\ \text{CCVLL\_numunutauuuu} \\ \text{CCVLL\_numunutauuuu} \\ CCVLL\_numunutauuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuu$	CVLL_numunumudd	$\frac{4G_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{d}_L\gamma_{\mu}d_L)$	${ m R}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVLL_numunumuee	$\frac{4G_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{e}_L\gamma_{\mu}e_L)$	R
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	CVLL_numunumumumu	$4\frac{4G_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{\mu L})(ar{\mu}_L\gamma_\mu\mu_L)$	R
$\begin{array}{c} \text{CVLL\_numunutaudd} & \frac{4G_F^C}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L) & \text{C} \\ \text{CVLL\_numunutauee} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) & \text{C} \\ \text{CVLL\_numunutaumum} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\mu}_L\gamma_{\mu}\mu_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) & \text{C} \\ \end{array}$	CVLL_numunumuss	$\frac{4G_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{s}_L\gamma_{\mu}s_L)$	R
$\begin{array}{c} \text{CVLL\_numunutauee} & \frac{4\tilde{G}_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_L\gamma_{\mu}e_L) & \text{C} \\ \text{CVLL\_numunutaumum} \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{\mu}_L\gamma_{\mu}\mu_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) & \text{C} \\ \end{array}$	CVLL_numunumuuu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_L\gamma_{\mu}u_L)$	R
$\begin{array}{c} \text{CVLL\_numunutaumumu} \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{\mu}_L \gamma_{\mu} \mu_L) & \text{C} \\ \text{CVLL\_numunutauss} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{s}_L \gamma_{\mu} s_L) & \text{C} \\ \text{CVLL\_numunutauuu} & \frac{4G_F}{\sqrt{2}} (\bar{\nu}_{\mu L} \gamma^{\mu} \nu_{\tau L}) (\bar{u}_L \gamma_{\mu} u_L) & \text{C} \end{array}$	${\tt CVLL\_numunutaudd}$	$\frac{4G_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(\bar{d}_L\gamma_{\mu}d_L)$	$\mathbf{C}$
CVLL_numunutauss $\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L) \qquad \qquad C$ CVLL_numunutauuu $\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) \qquad \qquad C$	CVLL_numunutauee	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{ au L})(\bar{e}_L\gamma_{\mu}e_L)$	$\mathbf{C}$
CVLL_numunutauss $\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{s}_L\gamma_{\mu}s_L) \qquad \qquad C$ CVLL_numunutauuu $\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L) \qquad \qquad C$	CVLL_numunutaumum	$\frac{4\tilde{G}_F}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{\mu}_L\gamma_\mu\mu_L)$	$\mathbf{C}$
		. v.==	$\mathbf{C}$
CVLL_nutaunutaudd $\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{\tau L}\gamma^{\mu}\nu_{\tau L})(\bar{d}_L\gamma_{\mu}d_L)$ R	CVLL_numunutauuu	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_L\gamma_{\mu}u_L)$	$\mathbf{C}$
	CVLL_nutaunutaudd	$4\frac{4G_F}{\sqrt{2}}(ar{ u}_{ au L}\gamma^\mu u_{ au L})(ar{d}_L\gamma_\mu d_L)$	${ m R}$

WC name	Operator	Type
CVLL_nutaunutauee	$\pm \frac{4G_F}{\sqrt{2}} (\bar{ u}_{\tau L} \gamma^{\mu}  u_{\tau L}) (\bar{e}_L \gamma_{\mu} e_L)$	R
CVLL_nutaunutaumu	$\Delta \widetilde{G}_{T}^{F}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{\mu}_{L}\gamma_{\mu}\mu_{L})$	${ m R}$
CVLL_nutaunutauss	$s \frac{4 \check{G}_F^c}{\sqrt{2}} (\bar{ u}_{ au L} \gamma^\mu  u_{ au L}) (\bar{s}_L \gamma_\mu s_L)$	${ m R}$
CVLL_nutaunutauuu	$4\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{u}_{L}\gamma_{\mu}u_{L})$	R
CVLR_nuenuedd	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{d}_R\gamma_{\mu}d_R)$	R
CVLR_nuenueee	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{e}_R\gamma_{\mu}e_R)$	R
CVLR_nuenuemumu	$\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{\mu}_R\gamma_{\mu}\mu_R)$	R
CVLR_nuenuess	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{eL})(\bar{s}_R\gamma_{\mu}s_R)$	R
CVLR_nuenueuu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{eL})(\bar{u}_R\gamma_{\mu}u_R)$	R
CVLR_nuenumudd	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^{\mu} u_{\mu L})(\bar{d}_R\gamma_{\mu}d_R)$	$^{\mathrm{C}}$
CVLR_nuenumuee	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{e}_R\gamma_{\mu}e_R)$	$^{\mathrm{C}}$
CVLR_nuenumumumu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{\mu}_R\gamma_{\mu}\mu_R)$	$^{\mathrm{C}}$
CVLR_nuenumuss	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{\mu L})(\bar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CVLR_nuenumuuu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\mu L})(\bar{u}_R\gamma_{\mu}u_R)$	$\mathbf{C}$
CVLR_nuenutaudd	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{\tau L})(\bar{d}_R\gamma_\mu d_R)$	$\mathbf{C}$
CVLR_nuenutauee	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{\tau L})(\bar{e}_R\gamma_\mu e_R)$	$\mathbf{C}$
CVLR_nuenutaumumu	$4\frac{4\check{G}_F}{\sqrt{2}}(ar{ u}_{eL}\gamma^\mu u_{ au L})(ar{\mu}_R\gamma_\mu\mu_R)$	$\mathbf{C}$
CVLR_nuenutauss	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{eL}\gamma^\mu u_{\tau L})(\bar{s}_R\gamma_\mu s_R)$	$^{\mathrm{C}}$
CVLR_nuenutauuu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{eL}\gamma^{\mu}\nu_{\tau L})(\bar{u}_R\gamma_{\mu}u_R)$	$\mathbf{C}$
CVLR_numunumudd	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{d}_R\gamma_{\mu}d_R)$	R
CVLR_numunumuee	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{e}_R\gamma_{\mu}e_R)$	R
CVLR_numunumumumumumumumumumumumumumumumumum	$4\frac{4G_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{\mu}_R\gamma_{\mu}\mu_R)$	R
CVLR_numunumuss	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^{\mu} u_{\mu L})(\bar{s}_R\gamma_{\mu}s_R)$	R
CVLR_numunumuuu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\mu L})(\bar{u}_R\gamma_{\mu}u_R)$	R
${\tt CVLR\_numunutaudd}$	$\frac{4\check{G}_F^c}{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{d}_R\gamma_\mu d_R)$	$^{\mathrm{C}}$
CVLR_numunutauee	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{e}_R\gamma_{\mu}e_R)$	$\mathbf{C}$
CVLR_numunutaumum	$\exp^{4\widetilde{G}_F}_{\sqrt{2}}(ar{ u}_{\mu L}\gamma^\mu u_{ au L})(ar{\mu}_R\gamma_\mu\mu_R)$	$\mathbf{C}$
CVLR_numunutauss	$\frac{4\check{G}_F^c}{\sqrt{2}}(\bar{ u}_{\mu L}\gamma^\mu  u_{\tau L})(\bar{s}_R\gamma_\mu s_R)$	$\mathbf{C}$
CVLR_numunutauuu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{\nu}_{\mu L}\gamma^{\mu}\nu_{\tau L})(\bar{u}_R\gamma_{\mu}u_R)$	$\mathbf{C}$
CVLR_nutaunutaudd	$4\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{\nu}_{\tau L}\gamma^{\mu}\nu_{\tau L})(\bar{d}_R\gamma_{\mu}d_R)$	R
CVLR_nutaunutaue	$+rac{4\widetilde{G}_{F}^{2}}{\sqrt{2}}(ar{ u}_{ au L}\gamma^{\mu} u_{ au L})(ar{e}_{R}\gamma_{\mu}e_{R})$	R
CVLR_nutaunutaumu	$\frac{\partial \widetilde{G}_F}{\partial z} (\bar{ u}_{ au L} \gamma^\mu  u_{ au L}) (\bar{\mu}_R \gamma_\mu \mu_R)$	R
CVLR_nutaunutauss	$s  rac{4 ar{Q}_F^2}{\sqrt{2}} (ar{ u}_{ au L} \gamma^\mu  u_{ au L}) (ar{s}_R \gamma_\mu s_R)$	R
CVLR_nutaunutauuu	$4\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{\nu}_{\tau L}\gamma^{\mu} u_{\tau L})(\bar{u}_R\gamma_{\mu}u_R)$	R