Basis Bern (EFT WET-3)

Sectors

The effective Lagrangian is defined as

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

udenu

WC name	Operator	Type
1udee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{e}\gamma_\mu\nu_e)$	C
5udee	$\frac{4 \check{G}_F}{\sqrt{2}} (\bar{u} P_R d) (\bar{e} \nu_e)$	\mathbf{C}
1pudee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_e)$	\mathbf{C}
5pudee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{e}\nu_e)$	$^{\mathrm{C}}$
7pudee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_e)$	\mathbf{C}
1udemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{e}\gamma_\mu u_\mu)$	$^{\mathrm{C}}$
5udemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{e}\nu_\mu)$	$^{\mathrm{C}}$
1pudemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_\mu)$	\mathbf{C}
5pudemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{e}\nu_\mu)$	$^{\mathrm{C}}$
7pudemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_{\mu})$	\mathbf{C}
1udetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{e}\gamma_\mu \nu_ au)$	\mathbf{C}
5udetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{e}\nu_{\tau})$	\mathbf{C}
1pudetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_ au)$	$^{\mathrm{C}}$
5pudetau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{e}\nu_{\tau})$	$^{\mathrm{C}}$
7pudetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_\tau)$	$^{\mathrm{C}}$

udmunu

WC name	Operator	Type
1udmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_e)$	С
5udmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\mu}\nu_e)$	$^{\mathrm{C}}$
1pudmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_e)$	\mathbf{C}
5pudmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{\mu}\nu_e)$	\mathbf{C}
7pudmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$	\mathbf{C}
1udmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$	\mathbf{C}
5udmumu	$\begin{split} &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{R}\gamma^{\mu}d)(\bar{\mu}\gamma_{\mu}\nu_{e}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{R}d)(\bar{\mu}\nu_{e}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}\gamma^{\mu}d)(\bar{\mu}\gamma_{\mu}\nu_{e}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}d)(\bar{\mu}\nu_{e}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}d)(\bar{\mu}\nu_{e}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{e}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{R}\gamma^{\mu}d)(\bar{\mu}\gamma_{\mu}\nu_{\mu}) \\ &\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{R}d)(\bar{\mu}\nu_{\mu}) \end{split}$	$^{\mathrm{C}}$

WC name	Operator	Type
1pudmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$	С
5pudmumu	$\begin{array}{c} \frac{\sqrt{2}}{4G_F}(\bar{u}P_Ld)(\bar{\mu}\nu_{\mu}) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu}) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}d)(\bar{\mu}\gamma_{\mu}\nu_{\tau}) \end{array}$	$^{\mathrm{C}}$
7pudmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})$	$^{\mathrm{C}}$
1udmutau	$\frac{4 \widetilde{G_F}}{\sqrt{2}} (\bar{u} P_R \gamma^\mu d) (\bar{\mu} \gamma_\mu \nu_ au)$	\mathbf{C}
5udmutau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\mu}\nu_{\tau})$	\mathbf{C}
1pudmutau	$rac{4reve{Q}_{F}^{2}}{\sqrt{2}}(ar{u}P_{L}\gamma^{\mu}d)(ar{\mu}\gamma_{\mu} u_{ au})$	\mathbf{C}
5pudmutau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{\mu} u_{ au})$	\mathbf{C}
7pudmutau	$\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_\tau)$	$^{\mathrm{C}}$

sdsd

WC name	Operator	Type
1dsds	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}\gamma_{\mu}P_Ls)(\bar{d}\gamma^{\mu}P_Ls)}{\frac{4G_F}{\sqrt{2}}(\bar{d}_{\alpha}P_Ls_{\beta})(\bar{d}_{\beta}P_Rs_{\alpha})}$	С
5dsds	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{d}_{lpha}P_Ls_{eta})(\bar{d}_{eta}P_Rs_{lpha})$	\mathbf{C}
2dsds	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{d}P_Ls)$	\mathbf{C}
1pdsds	$\frac{4\overset{\underline{G}_{F}}{\sqrt{2}}(\bar{d}P_{L}s)(\bar{d}P_{L}s)}{\sqrt{2}}(\bar{d}\gamma_{\mu}P_{R}s)(\bar{d}\gamma^{\mu}P_{R}s)$	\mathbf{C}
3dsds	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (ar{d}_{lpha} P_L s_{eta}) (ar{d}_{eta} P_L s_{lpha})$	\mathbf{C}
2pdsds	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{d}P_Rs)$	\mathbf{C}
4dsds	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{d}P_Ls)(\bar{d}P_Rs)$	\mathbf{C}
3pdsds	$rac{4ar{G_F}}{\sqrt{2}}(ar{d}_lpha P_R s_eta)(ar{d}_eta P_R s_lpha)$	\mathbf{C}

usenu

WC name	Operator	Type
1usee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_e)$	\mathbf{C}
5usee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{e}\nu_e)$	\mathbf{C}
1pusee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_e)$	\mathbf{C}
5pusee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{e}\nu_e)$	$^{\mathrm{C}}$
7pusee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_e)$	\mathbf{C}
1usemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\mu})$	\mathbf{C}
5usemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{e}\nu_\mu)$	$^{\mathrm{C}}$
1pusemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\mu})$	$^{\mathrm{C}}$
5pusemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{e}\nu_\mu)$	$^{\mathrm{C}}$
7pusemu		$^{\mathrm{C}}$
1usetau	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_{\mu})}{\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\tau})}$	\mathbf{C}

WC name	Operator	Type
5usetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{e}\nu_{\tau})$	С
1pusetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\tau})$	\mathbf{C}
5pusetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{e}\nu_{\tau})$	\mathbf{C}
7pusetau	$\begin{array}{l} \frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{e}\nu_\tau) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{e}\gamma_\mu\nu_\tau) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{e}\nu_\tau) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_\tau) \end{array}$	$^{\mathrm{C}}$

usmunu

WC name	Operator	Type
1usmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_e)$	C
5usmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\mu}\nu_e)$	$^{\mathrm{C}}$
1pusmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_e)$	$^{\mathrm{C}}$
5pusmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\mu}\nu_e)$	$^{\mathrm{C}}$
7pusmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$	$^{\mathrm{C}}$
1usmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_{\mu})$	$^{\mathrm{C}}$
5usmumu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\mu}\nu_{\mu})$	$^{\mathrm{C}}$
1pusmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_{\mu})$	$^{\mathrm{C}}$
5pusmumu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\mu}\nu_{\mu})$	$^{\mathrm{C}}$
7pusmumu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})$	$^{\mathrm{C}}$
1usmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu s)(\bar{\mu}\gamma_\mu\nu_ au)$	$^{\mathrm{C}}$
5usmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\mu}\nu_{\tau})$	\mathbf{C}
1pusmutau	$\frac{4\widetilde{G}_F^F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{\mu}\gamma_\mu u_ au)$	$^{\mathrm{C}}$
5pusmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\mu} u_{ au})$	$^{\mathrm{C}}$
7pusmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_{ au})$	$^{\mathrm{C}}$

sd

WC name	Operator	Type
7gammads	$\frac{4G_F}{\sqrt{2}}\frac{e}{c^2}m_s(\bar{d}P_R\sigma_{\mu\nu}s)F^{\mu\nu}$	\overline{C}
8gds	$rac{4G_F}{\sqrt{2}}rac{e_s^2}{g_s^2}m_s(ar{d}P_R\sigma_{\mu u}s)F^{\mu u} \ rac{4G_F}{\sqrt{2}}rac{1}{g_s}m_s(ar{d}P_R\sigma_{\mu u}T^As)G_A^{\mu u}$	\mathbf{C}
7pgammads	$\frac{4G_F}{R} = \frac{e}{3} m_o (dP_I \sigma_{obs}) F^{\mu\nu}$	\mathbf{C}
8pgds	$\begin{array}{c} \sqrt{2} \ g_s^2 N s (\bar{u} T E \mu \bar{\nu})^2 \\ \frac{4G_F}{\sqrt{2}} \frac{1}{g_s} m_s (\bar{d} P_L \sigma_{\mu\nu} T^A s) G_A^{\mu\nu} \\ \frac{4G_F}{\sqrt{2}} (\bar{d} P_R \gamma_{\mu} s) (\bar{u} \gamma^{\mu} u) \\ \frac{4G_F}{\sqrt{2}} (\bar{d} P_R \gamma_{\mu} T^A s) (\bar{u} \gamma^{\mu} T^A u) \\ \frac{4G_F}{\sqrt{2}} (\bar{d} P_R \gamma_{\mu\nu\rho} s) (\bar{u} \gamma^{\mu\nu\rho} u) \\ \frac{4G_F}{\sqrt{2}} (\bar{d} P_R \gamma_{\mu\nu\rho} T^A s) (\bar{u} \gamma^{\mu\nu\rho} T^A u) \end{array}$	\mathbf{C}
1dsuu	$rac{4G_F}{\sqrt{2}}(ar{d}P_R\gamma_\mu s)(ar{u}\gamma^\mu u)$	\mathbf{C}
2dsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu T^A s)(\bar{u}\gamma^\mu T^A u)$	\mathbf{C}
3dsuu	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu\nu\rho}u)$	\mathbf{C}
4dsuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu\nu\rho}T^Au)$	\mathbf{C}

WC name	Operator	Type
5dsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{u}u)$	C
6dsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{u}T^Au)$	$^{\mathrm{C}}$
7dsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}u)$	\mathbf{C}
8dsuu	$\frac{4\ddot{G}_F^c}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}T^As)(\bar{u}\sigma_{\mu\nu}T^Au)$ $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{u}\gamma^{\mu\nu\rho\sigma}u)$	$^{\mathrm{C}}$
9dsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{u}\gamma^{\mu\nu\rho\sigma}u)$	$^{\mathrm{C}}$
10dsuu	$\frac{4\overleftarrow{G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}T^As)(\bar{u}\gamma^{\mu\nu\rho\sigma}T^Au)$	$^{\mathrm{C}}$
1pdsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{u}\gamma^\mu u)$	$^{\mathrm{C}}$
2pdsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^A s)(\bar{u}\gamma^\mu T^A u)$	$^{\mathrm{C}}$
3pdsuu	$\frac{4G_F}{\sqrt{2}}(dP_L\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu\nu\rho}u)$	$^{\mathrm{C}}$
4pdsuu	$\frac{4\overset{C}{Q_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu\nu\rho}T^Au)$	$^{\mathrm{C}}$
5pdsuu	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{d}P_Ls)(\bar{u}u)$	$^{\mathrm{C}}$
6pdsuu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_LT^As)(\bar{u}T^Au)$	$^{\mathrm{C}}$
7pdsuu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}u)$	$^{\mathrm{C}}$
8pdsuu	$\frac{4G_F^2}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}T^As)(\bar{u}\sigma_{\mu\nu}T^Au)$ $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{u}\gamma^{\mu\nu\rho\sigma}u)$	$^{\mathrm{C}}$
9pdsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{u}\gamma^{\mu\nu\rho\sigma}u)$	$^{\mathrm{C}}$
10pdsuu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}T^As)(\bar{u}\gamma^{\mu\nu\rho\sigma}T^Au)$	\mathbf{C}
1dsss	$\frac{4 {\check G_F}}{\sqrt{2}} ({ar d} P_R \gamma_\mu s) ({ar s} \gamma^\mu s)$	$^{\mathrm{C}}$
3dsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{s}\gamma^{\mu\nu\rho}s)$	\mathbf{C}
5dsss	$\frac{4\tilde{G_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{s}s)$	$^{\mathrm{C}}$
7dsss	$\frac{4\overleftarrow{G_F}}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{s}\sigma_{\mu\nu}s)$	$^{\mathrm{C}}$
9dsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{s}\gamma^{\mu\nu\rho\sigma}s)$	$^{\mathrm{C}}$
1pdsss	$rac{4 \overleftarrow{G_F}}{\sqrt{2}} (ar{d} P_L \gamma_\mu s) (ar{s} \gamma^\mu s)$	$^{\mathrm{C}}$
3pdsss	$rac{4G_F^2}{\sqrt{2}}(ar{d}P_L\gamma_{\mu u ho}s)(ar{s}\gamma^{\mu u ho}s) \ rac{4G_F}{\sqrt{2}}(ar{d}P_Ls)(ar{s}s)$	\mathbf{C}
5pdsss	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{s}s)$	$^{\mathrm{C}}$
7pdsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{s}\sigma_{\mu\nu}s)$	$^{\mathrm{C}}$
9pdsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{s}\gamma^{\mu\nu\rho\sigma}s)$	$^{\mathrm{C}}$
1dsdd	$rac{4G_F}{\sqrt{2}}(ar{d}\gamma_\mu P_L s)(ar{d}\gamma^\mu d)$	\mathbf{C}
1pdsdd	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}\gamma_{\mu}P_Rs)(\bar{d}\gamma^{\mu}d)}{\frac{4G_F}{\sqrt{2}}(\bar{d}\gamma_{\mu\nu\rho}P_Ls)(\bar{d}\gamma^{\mu\nu\rho}d)}$	$^{\mathrm{C}}$
3dsdd	$\frac{4 \check{G_F}}{\sqrt{2}} (\bar{d} \gamma_{\mu\nu\rho} P_L s) (\bar{d} \gamma^{\mu\nu\rho} d)$	$^{\mathrm{C}}$
3pdsdd	$4G_F(\bar{d}_{2}, P_{re})(\bar{d}_{2}, \mu\nu\rho_{d})$	\mathbf{C}
5dsdd	$\frac{4\tilde{G_F}}{\sqrt{2}}(\bar{d}P_Ls)(\bar{d}d)$	$^{\mathrm{C}}$
5pdsdd	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{d}d)$	$^{\mathrm{C}}$
7dsdd	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}\sigma^{\mu\nu}P_Ls)(\bar{d}\sigma_{\mu\nu}d)$	$^{\mathrm{C}}$
7pdsdd	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}\sigma^{\mu\nu}P_Rs)(\bar{d}\sigma_{\mu\nu}d)$	$^{\mathrm{C}}$
9dsdd	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}\gamma_{\mu\nu\rho\sigma}P_Ls)(\bar{d}\gamma^{\mu\nu\rho\sigma}d)$	$^{\mathrm{C}}$
9pdsdd	$\frac{\sqrt{2}}{4G_F} (\bar{d}\gamma_{\mu\nu\rho} \Gamma_R s)(\bar{d}\gamma^{\mu\nu} d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}P_L s)(\bar{d}d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\rho_R s)(\bar{d}d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\sigma^{\mu\nu} P_L s)(\bar{d}\sigma_{\mu\nu} d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\sigma^{\mu\nu} P_R s)(\bar{d}\sigma_{\mu\nu} d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\gamma_{\mu\nu\rho\sigma} P_L s)(\bar{d}\gamma^{\mu\nu\rho\sigma} d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\gamma_{\mu\nu\rho\sigma} P_R s)(\bar{d}\gamma^{\mu\nu\rho\sigma} d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\gamma_{\mu\nu\rho\sigma} P_R s)(\bar{d}\gamma^{\mu\nu\rho\sigma} d)$ $\frac{4G_F}{\sqrt{2}} (\bar{d}\rho_R \gamma_\mu s)(\bar{e}\gamma^\mu e)$	$^{\mathrm{C}}$
1dsee	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{e}\gamma^\mu e)$	$^{\mathrm{C}}$

WC name	Operator	Type
1pdsee	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{e}\gamma^\mu e)$	С
3dsee	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}e)$	$^{\mathrm{C}}$
3pdsee	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}e)$	\mathbf{C}
5dsee	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{e}e)$	$^{\mathrm{C}}$
5pdsee	$\frac{4\overleftarrow{Q}_{F}^{2}}{\sqrt{2}}(\bar{d}P_{L}s)(\bar{e}e)$	$^{\mathrm{C}}$
7dsee	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}e)$	\mathbf{C}
7pdsee	$\frac{4\tilde{Q}_F^2}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}e)$	\mathbf{C}
9dsee	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}e)$	$^{\mathrm{C}}$
9pdsee	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}e)$	\mathbf{C}
1dsmumu	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\mu}\gamma^\mu\mu)$	\mathbf{C}
1pdsmumu	$\frac{4\overleftarrow{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\mu}\gamma^\mu\mu)$	\mathbf{C}
3dsmumu	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}\mu)$	\mathbf{C}
3pdsmumu	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}\mu)$	\mathbf{C}
5dsmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\mu}\mu)$	\mathbf{C}
5pdsmumu	$\frac{4\overleftarrow{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{\mu}\mu)$	\mathbf{C}
7dsmumu	$\frac{4\overset{Q^2}{G_F}}{\sqrt{2}}(ar{d}P_R\sigma^{\mu u}s)(ar{\mu}\sigma_{\mu u}\mu)$	$^{\mathrm{C}}$
7pdsmumu	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\mu)$	$^{\mathrm{C}}$
9dsmumu	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}\mu)$	$^{\mathrm{C}}$
9pdsmumu	$\frac{4G_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}\mu)$	$^{\mathrm{C}}$

sdmue

WC name	Operator	Type
1dsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{e}\gamma^\mu\mu)$	C
1pdsemu	$\frac{4G_F}{\bar{e}}(\bar{d}P_L\gamma_{\mu}s)(\bar{e}\gamma^{\mu}\mu)$	\mathbf{C}
3dsemu	$\frac{\sqrt{2}}{\sqrt{2}} (\bar{d}P_R \gamma_{\mu\nu\rho} s) (\bar{e}\gamma^{\mu\nu\rho} \mu)$	\mathbf{C}
3pdsemu	$\frac{4G_F}{\sqrt{2}}(dP_L\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\mu)$	\mathbf{C}
5dsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{e}\mu)$	\mathbf{C}
5pdsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{e}\mu)$	\mathbf{C}
7dsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\mu)$	\mathbf{C}
7pdsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\mu)$	\mathbf{C}
9dsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\mu)$	\mathbf{C}
9pdsemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\mu)$ $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\mu)$	\mathbf{C}

sdemu

WC name	Operator	Type
1dsmue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\mu}\gamma^\mu e)$	C
1pdsmue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\mu}\gamma^\mu e)$	\mathbf{C}
3dsmue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}e)$	\mathbf{C}
3pdsmue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}e)$	\mathbf{C}
5dsmue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\mu}e)$	\mathbf{C}
5pdsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{\mu}e)$	\mathbf{C}
7dsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}e)$	\mathbf{C}
7pdsmue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}e)$	\mathbf{C}
9dsmue		\mathbf{C}
9pdsmue	$\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}e)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}e)$	$^{\mathrm{C}}$

${\tt sdnunu}$

WC name	Operator	Type
nu1dsee	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_e\gamma^\mu\nu_e)$	С
nu1pdsee	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{ u}_e\gamma^\mu u_e)$	\mathbf{C}
nu1dsmumu	$\frac{4\check{G}_F}{\sqrt{2}}(ar{d}P_R\gamma_\mu s)(ar{ u}_\mu\gamma^\mu u_\mu)$	\mathbf{C}
nu1pdsmumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\nu}_\mu\gamma^\mu\nu_\mu)$	\mathbf{C}
nu1dstautau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_\tau\gamma^\mu\nu_\tau)$	\mathbf{C}
nu1pdstautau	$\frac{4 \stackrel{\circ}{G_F}}{\sqrt{2}} (\bar{d} P_L \gamma_\mu s) (\bar{ u}_ au \gamma^\mu u_ au)$	\mathbf{C}
nu1dsemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_e\gamma^\mu u_\mu)$	\mathbf{C}
nu1pdsemu	$rac{4 \overset{\circ}{G_F}}{\sqrt{2}} (ar{d} P_L \gamma_\mu s) (ar{ u}_e \gamma^\mu u_\mu)$	\mathbf{C}
nu1dsmue	$\frac{4\overleftarrow{Q}_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu}s)(\bar{\nu}_{\mu}\gamma^{\mu}\nu_{e})$	\mathbf{C}
nu1pdsmue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\nu}_\mu\gamma^\mu\nu_e)$	\mathbf{C}
nu1dsetau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_e\gamma^\mu\nu_ au)$	\mathbf{C}
nu1pdsetau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{ u}_e\gamma^\mu u_ au)$	\mathbf{C}
nu1dstaue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_\tau\gamma^\mu\nu_e)$	\mathbf{C}
nu1pdstaue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\nu}_\tau\gamma^\mu\nu_e)$	\mathbf{C}
nu1dstaumu	$\frac{4\overleftarrow{Q}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{ u}_ au\gamma^\mu u_\mu)$	\mathbf{C}
nu1pdstaumu	$\frac{4\overleftarrow{Q}_{F}}{\sqrt{2}}(\bar{d}P_{L}\gamma_{\mu}s)(\bar{\nu}_{ au}\gamma^{\mu} u_{\mu})$	\mathbf{C}
nu1dsmutau	$\frac{4\mathring{Q}_{F}^{2}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu}s)(\bar{\nu}_{\mu}\gamma^{\mu}\nu_{ au})$	\mathbf{C}
nu1pdsmutau	$rac{4 \stackrel{\circ}{G_F}}{\sqrt{2}} (ar{d} P_L \gamma_\mu s) (ar{ u}_\mu \gamma^\mu u_ au)$	\mathbf{C}

dF=0

WC name	Operator	Type
G	$\frac{4G_F}{\sqrt{2}}\frac{1}{q_s}f^{ABC}G^{A u}_{\mu}G^{B ho}_{ u}G^{C\mu}_{ ho}$	R
Gtilde	$rac{4\widetilde{G}_F}{\sqrt{2}}rac{1}{g_s}f^{ABC}\widetilde{\widetilde{G}}_{\mu}^{A u}G_{ u}^{B ho}G_{ ho}^{C\mu}$	${ m R}$
ugamma_11	$\frac{4 \tilde{G}_F}{\sqrt{2}} \frac{e}{q_z^2} m_u \bar{u}_L \sigma^{\mu u} u_R F_{\mu u}$	$^{\mathrm{C}}$
dgamma_11	$\frac{4G_F}{\sqrt{2}}\frac{e_s^2}{q_s^2}m_dar{d}_L\sigma^{\mu u}d_RF_{\mu u}$	$^{\mathrm{C}}$
dgamma_22	$\frac{4\tilde{G}_F}{\sqrt{2}}\frac{\tilde{e}_s^2}{q_s^2}m_sar{s}_L\sigma^{\mu u}s_RF_{\mu u}$	$^{\mathrm{C}}$
uG_11	$rac{4 \widetilde{G_F}}{\sqrt{2}} rac{1}{g_s} m_u ar{u}_L \sigma^{\mu u} T^A u_R G^A_{\mu u}$	$^{\mathrm{C}}$
dG_11	$\frac{4G_F}{\sqrt{2}}\frac{1}{q_s}m_d\bar{d}_L\sigma^{\mu\nu}T^Ad_RG_{\mu\nu}^A$	$^{\mathrm{C}}$
dG_22	$\frac{4G_F}{\sqrt{2}}\frac{1}{a_s}m_sar{s}_L\sigma^{\mu\nu}T^As_RG_{\mu\nu}^A$	$^{\mathrm{C}}$
TeuRR_1111	$\frac{4G_F}{\sqrt{2}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{u}_L\sigma_{\mu\nu}u_R)$	$^{\mathrm{C}}$
TeuRR_2211	$rac{4\check{G}_F}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{u}_L\sigma_{\mu u}u_R)$	$^{\mathrm{C}}$
TedRR_1111	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{d}_L\sigma_{\mu\nu}d_R)$	$^{\mathrm{C}}$
TedRR_1122	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{e}_L\sigma^{\mu\nu}e_R)(\bar{s}_L\sigma_{\mu\nu}s_R)$	$^{\mathrm{C}}$
TedRR_2211	$rac{4reve{G_F}}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{d}_L\sigma_{\mu u}d_R)$	$^{\mathrm{C}}$
TedRR_2222	$rac{4ar{G}_F}{\sqrt{2}}(ar{\mu}_L\sigma^{\mu u}\mu_R)(ar{s}_L\sigma_{\mu u}s_R)$	$^{\mathrm{C}}$
S1uuRR_1111	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}_Lu_R)(\bar{u}_Lu_R)$	$^{\mathrm{C}}$
S8uuRR_1111	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{u}_L T^A u_R)$	$^{\mathrm{C}}$
S1udRR_1111	$rac{4G_F}{\sqrt{2}}(ar{u}_L u_R)(ar{d}_L d_R)$	$^{\mathrm{C}}$
S1udRR_1122	$\frac{4 G_F}{\sqrt{2}} (\bar{u}_L u_R) (\bar{s}_L s_R)$	\mathbf{C}
S8udRR_1111	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{d}_L T^A d_R)$	$^{\mathrm{C}}$
S8udRR_1122	$\frac{4G_F}{\sqrt{2}}(\bar{u}_L T^A u_R)(\bar{s}_L T^A s_R)$	$^{\mathrm{C}}$
S1ddRR_1111	$rac{4 ar{G}_F}{\sqrt{2}} (ar{d}_L d_R) (ar{d}_L d_R)$	$^{\mathrm{C}}$
S1ddRR_1122	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}_Ld_R)(\bar{s}_Ls_R)$	$^{\mathrm{C}}$
S1ddRR_1221	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{d}_L s_R) (\bar{s}_L d_R)$	$^{\mathrm{C}}$
S1ddRR_2222	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{s}_L s_R)(\bar{s}_L s_R)$	$^{\mathrm{C}}$
S8ddRR_1111	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}_LT^Ad_R)(\bar{d}_LT^Ad_R)$	$^{\mathrm{C}}$
S8ddRR_1122	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}_LT^Ad_R)(\bar{s}_LT^As_R)$	$^{\mathrm{C}}$
S8ddRR_1221	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}_L T^A s_R)(\bar{s}_L T^A d_R)$	$^{\mathrm{C}}$
S8ddRR_2222	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{s}_L T^A s_R)(\bar{s}_L T^A s_R)$	$^{\mathrm{C}}$
S1udduRR_1111	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}_L d_R)(\bar{d}_L u_R)$	$^{\mathrm{C}}$
S1udduRR_1221	$\frac{4\overset{\checkmark}{G_F}}{\sqrt{2}}(\bar{u}_L s_R)(\bar{s}_L u_R)$	\mathbf{C}
S8udduRR_1111	$\frac{4\overset{\leftarrow}{G_F}}{\sqrt{2}}(\bar{u}_L T^A d_R)(\bar{d}_L T^A u_R)$	\mathbf{C}
S8udduRR_1221	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{u}_L T^A s_R)(\bar{s}_L T^A u_R)$	\mathbf{C}