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`	$(\bar{d}_L \gamma^\mu s_L)(\bar{d}_L \gamma_\mu s_L)$	C
`CVRR_sdsd`	$(\bar{d}_R \gamma^\mu s_R)(\bar{d}_R \gamma_\mu s_R)$	C
`CSLL_sdsd`	$(\bar{d}_R s_L)(\bar{d}_R s_L)$	C
`CSRR_sdsd`	$(\bar{d}_L s_R)(\bar{d}_L s_R)$	C
`CTLL_sdsd`	$(\bar{d}_R \sigma^{\mu\nu} s_L)(\bar{d}_R \sigma_{\mu\nu} s_L)$	C
`CTRR_sdsd`	$(\bar{d}_L \sigma^{\mu\nu} s_R)(\bar{d}_L \sigma_{\mu\nu} s_R)$	C
`CVLR_sdsd`	$(\bar{d}_L \gamma^\mu s_L)(\bar{d}_R \gamma_\mu s_R)$	C
`CSLR_sdsd`	$(\bar{d}_R s_L)(\bar{d}_L s_R)$	C

`sd`

WC name	Operator	Type
`C9_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_L \gamma^\mu s_L)(\bar{e} \gamma_\mu e)$	C
`C9p_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_R \gamma^\mu s_R)(\bar{e} \gamma_\mu e)$	C
`C10_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_L \gamma^\mu s_L)(\bar{e} \gamma_\mu \gamma_5 e)$	C
`C10p_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_R \gamma^\mu s_R)(\bar{e} \gamma_\mu \gamma_5 e)$	C
`CS_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_L s_R)(\bar{e} e)$	C
`CSp_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_R s_L)(\bar{e} e)$	C
`CP_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_L s_R)(\bar{e} \gamma_5 e)$	C
`CPp_sdee`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_R s_L)(\bar{e} \gamma_5 e)$	C
`C9_sdmumu`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_L \gamma^\mu s_L)(\bar{\mu} \gamma_\mu \mu)$	C
`C9p_sdmumu`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_R \gamma^\mu s_R)(\bar{\mu} \gamma_\mu \mu)$	C
`C10_sdmumu`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_L \gamma^\mu s_L)(\bar{\mu} \gamma_\mu \gamma_5 \mu)$	C
`C10p_sdmumu`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} (\bar{d}_R \gamma^\mu s_R)(\bar{\mu} \gamma_\mu \gamma_5 \mu)$	C
`CS_sdmumu`	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_L s_R)(\bar{\mu} \mu)$	C

WC name	Operator	Type
CSp_sdmumu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_R s_L)(\bar{\mu}\mu)$	C
CP_sdmumu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_L s_R)(\bar{\mu}\gamma_5\mu)$	C
CPp_sdmumu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e^2}{16\pi^2} m_s (\bar{d}_R s_L)(\bar{\mu}\gamma_5\mu)$	C
C7_sd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e}{16\pi^2} m_s (\bar{d}_L \sigma^{\mu\nu} s_R) F_{\mu\nu}$	C
C7p_sd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{e}{16\pi^2} m_s (\bar{d}_R \sigma^{\mu\nu} s_L) F_{\mu\nu}$	C
C8_sd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{g_s}{16\pi^2} m_s (\bar{d}_L \sigma^{\mu\nu} T^a s_R) G^a_{\mu\nu}$	C
C8p_sd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* \frac{g_s}{16\pi^2} m_s (\bar{d}_R \sigma^{\mu\nu} T^a s_L) G^a_{\mu\nu}$	C
CVLL_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L)(\bar{s}_L \gamma_\mu s_L)$	C
CVLR_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L)(\bar{s}_R \gamma_\mu s_R)$	C
CVRL_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R)(\bar{s}_L \gamma_\mu s_L)$	C
CVRR_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R)(\bar{s}_R \gamma_\mu s_R)$	C
CSLL_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L)(\bar{s}_R s_L)$	C
CSLR_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L)(\bar{s}_L s_R)$	C
CSRL_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R)(\bar{s}_R s_L)$	C
CSRR_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R)(\bar{s}_L s_R)$	C
CTLL_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_L)(\bar{s}_R \sigma_{\mu\nu} s_L)$	C
CTRR_sdss	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	C
CVLL_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L)(\bar{d}_L \gamma_\mu d_L)$	C
CVLR_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L)(\bar{d}_R \gamma_\mu d_R)$	C
CVRL_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R)(\bar{d}_L \gamma_\mu d_L)$	C
CVRR_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R)(\bar{d}_R \gamma_\mu d_R)$	C
CSLL_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L)(\bar{d}_R d_L)$	C
CSLR_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L)(\bar{d}_L d_R)$	C
CSRL_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R)(\bar{d}_R d_L)$	C
CSRR_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R)(\bar{d}_L d_R)$	C
CTLL_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_L)(\bar{d}_R \sigma_{\mu\nu} d_L)$	C
CTRR_sddd	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \sigma^{\mu\nu} s_R)(\bar{d}_L \sigma_{\mu\nu} d_R)$	C
CVLL_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L)(\bar{u}_L \gamma_\mu u_L)$	C
CVLR_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L \gamma^\mu s_L)(\bar{u}_R \gamma_\mu u_R)$	C
CVRL_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R)(\bar{u}_L \gamma_\mu u_L)$	C
CVRR_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \gamma^\mu s_R)(\bar{u}_R \gamma_\mu u_R)$	C
CSLL_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L)(\bar{u}_R u_L)$	C
CSLR_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R s_L)(\bar{u}_L u_R)$	C
CSRL_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R)(\bar{u}_R u_L)$	C
CSRR_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_L s_R)(\bar{u}_L u_R)$	C
CTLL_sduu	$\frac{4G_F}{\sqrt{2}} V_{ts} V_{td}^* (\bar{d}_R \sigma^{\mu\nu} s_L)(\bar{u}_R \sigma_{\mu\nu} u_L)$	C

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

sdnunu

WC name	Operator	Type
CL_sdnuenue	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_e)$	C
CL_sdnumunumu	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_\mu \gamma_\mu (1-\gamma_5) \nu_\mu)$	C
CL_sdnutaunutau	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_\tau)$	C
CL_sdnuenumu	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_\mu \gamma_\mu (1-\gamma_5) \nu_e)$	C
CL_sdnumunue	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_\mu)$	C
CL_sdnumunutau	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_\mu)$	C
CL_sdnutaunumu	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_\mu \gamma_\mu (1-\gamma_5) \nu_\tau)$	C
CL_sdnuenutau	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_e)$	C
CL_sdnutaunue	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu d_L)(\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_\tau)$	C
CR_sdnuenue	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_e)$	C
CR_sdnumunumu	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_\mu \gamma_\mu (1-\gamma_5) \nu_\mu)$	C
CR_sdnutaunutau	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_\tau)$	C
CR_sdnuenumu	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_\mu \gamma_\mu (1-\gamma_5) \nu_e)$	C
CR_sdnumunue	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_\mu)$	C
CR_sdnumunutau	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_\mu)$	C
CR_sdnutaunumu	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_\mu \gamma_\mu (1-\gamma_5) \nu_\tau)$	C
CR_sdnuenutau	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_\tau \gamma_\mu (1-\gamma_5) \nu_e)$	C
CR_sdnutaunue	$\frac{4G_F}{\sqrt{2}} V_{td} V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu d_R)(\bar{\nu}_e \gamma_\mu (1-\gamma_5) \nu_\tau)$	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	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
CSR_suenue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R\nu_{eL})$	C
CSL_suenue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{e}_R\nu_{eL})$	C
CT_suenue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu} s_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{eL})$	C
CVL_suenumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{e}_L\gamma_\mu\nu_{\mu L})$	C
CVR_suenumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{e}_L\gamma_\mu\nu_{\mu L})$	C
CSR_suenumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R\nu_{\mu L})$	C
CSL_suenumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{e}_R\nu_{\mu L})$	C
CT_suenumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu} s_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	C
CVL_suenutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{e}_L\gamma_\mu\nu_{\tau L})$	C
CVR_suenutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{e}_L\gamma_\mu\nu_{\tau L})$	C
CSR_suenutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{e}_R\nu_{\tau L})$	C
CSL_suenutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{e}_R\nu_{\tau L})$	C
CT_suenutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu} s_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	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	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{\mu}_L\gamma_\mu\nu_{eL})$	C
CSR_sumunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\mu}_R\nu_{eL})$	C
CSL_sumunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{\mu}_R\nu_{eL})$	C
CT_sumunue	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu} s_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{eL})$	C
CVL_sumunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	C
CVR_sumunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	C
CSR_sumunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\mu}_R\nu_{\mu L})$	C
CSL_sumunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{\mu}_R\nu_{\mu L})$	C
CT_sumunumu	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu} s_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\mu L})$	C
CVL_sumunutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L\gamma^\mu s_L)(\bar{\mu}_L\gamma_\mu\nu_{\tau L})$	C
CVR_sumunutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\gamma^\mu s_R)(\bar{\mu}_L\gamma_\mu\nu_{\tau L})$	C
CSR_sumunutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_L s_R)(\bar{\mu}_R\nu_{\tau L})$	C
CSL_sumunutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R s_L)(\bar{\mu}_R\nu_{\tau L})$	C
CT_sumunutau	$-\frac{4G_F}{\sqrt{2}}V_{us}(\bar{u}_R\sigma^{\mu\nu} s_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\tau L})$	C

udenu

WC name	Operator	Type
CVL_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
CVR_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
CSR_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L d_R)(\bar{e}_R\nu_{eL})$	C
CSL_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{e}_R\nu_{eL})$	C
CT_duenue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu} d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{eL})$	C
CVL_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{e}_L\gamma_\mu\nu_{\mu L})$	C
CVR_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{e}_L\gamma_\mu\nu_{\mu L})$	C
CSR_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L d_R)(\bar{e}_R\nu_{\mu L})$	C
CSL_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{e}_R\nu_{\mu L})$	C
CT_duenumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu} d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\mu L})$	C
CVL_duenutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{e}_L\gamma_\mu\nu_{\tau L})$	C
CVR_duenutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{e}_L\gamma_\mu\nu_{\tau L})$	C
CSR_duenutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L d_R)(\bar{e}_R\nu_{\tau L})$	C
CSL_duenutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{e}_R\nu_{\tau L})$	C
CT_duenutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu} d_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{\tau L})$	C

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	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{\mu}_L\gamma_\mu\nu_{eL})$	C
CSR_dumunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L d_R)(\bar{\mu}_R\nu_{eL})$	C
CSL_dumunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{\mu}_R\nu_{eL})$	C
CT_dumunue	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu} d_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{eL})$	C
CVL_dumunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	C
CVR_dumunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	C
CSR_dumunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L d_R)(\bar{\mu}_R\nu_{\mu L})$	C
CSL_dumunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{\mu}_R\nu_{\mu L})$	C
CT_dumunumu	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu} d_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\mu L})$	C
CVL_dumunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L\gamma^\mu d_L)(\bar{\mu}_L\gamma_\mu\nu_{\tau L})$	C
CVR_dumunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\gamma^\mu d_R)(\bar{\mu}_L\gamma_\mu\nu_{\tau L})$	C
CSR_dumunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_L d_R)(\bar{\mu}_R\nu_{\tau L})$	C
CSL_dumunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R d_L)(\bar{\mu}_R\nu_{\tau L})$	C
CT_dumunutau	$-\frac{4G_F}{\sqrt{2}}V_{ud}(\bar{u}_R\sigma^{\mu\nu} d_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\tau L})$	C

dF=0

WC name	Operator	Type
CG	$\frac{4G_F}{\sqrt{2}} f^{ABC} G_\mu^{A\nu} G_\nu^{B\rho} G_\rho^{C\mu}$	R
CGtilde	$\frac{4G_F}{\sqrt{2}} f^{ABC} \widetilde{G}_\mu^{A\nu} G_\nu^{B\rho} G_\rho^{C\mu}$	R
C7_uu	$\frac{4G_F}{\sqrt{2}} \frac{e}{16\pi^2} m_u \bar{u}_L \sigma^{\mu\nu} u_R F_{\mu\nu}$	C
C7_dd	$\frac{4G_F}{\sqrt{2}} \frac{e}{16\pi^2} m_d \bar{d}_L \sigma^{\mu\nu} d_R F_{\mu\nu}$	C
C7_ss	$\frac{4G_F}{\sqrt{2}} \frac{e}{16\pi^2} m_s \bar{s}_L \sigma^{\mu\nu} s_R F_{\mu\nu}$	C
C8_uu	$\frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_u \bar{u}_L \sigma^{\mu\nu} T^A u_R G^A_{\mu\nu}$	C
C8_dd	$\frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_d \bar{d}_L \sigma^{\mu\nu} T^A d_R G^A_{\mu\nu}$	C
C8_ss	$\frac{4G_F}{\sqrt{2}} \frac{g_s}{16\pi^2} m_s \bar{s}_L \sigma^{\mu\nu} T^A s_R G^A_{\mu\nu}$	C
CTRR_eeuu	$\frac{4G_F}{\sqrt{2}} (\bar{e}_L \sigma^{\mu\nu} e_R)(\bar{u}_L \sigma_{\mu\nu} u_R)$	C
CTRR_mumuuu	$\frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \sigma^{\mu\nu} \mu_R)(\bar{u}_L \sigma_{\mu\nu} u_R)$	C
CTRR_eedd	$\frac{4G_F}{\sqrt{2}} (\bar{e}_L \sigma^{\mu\nu} e_R)(\bar{d}_L \sigma_{\mu\nu} d_R)$	C
CTRR_eess	$\frac{4G_F}{\sqrt{2}} (\bar{e}_L \sigma^{\mu\nu} e_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	C
CTRR_mumudd	$\frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \sigma^{\mu\nu} \mu_R)(\bar{d}_L \sigma_{\mu\nu} d_R)$	C
CTRR_mumuss	$\frac{4G_F}{\sqrt{2}} (\bar{\mu}_L \sigma^{\mu\nu} \mu_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	C
CS1RR_uuuu	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L u_R)(\bar{u}_L u_R)$	C
CS8RR_uuuu	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L T^A u_R)(\bar{u}_L T^A u_R)$	C
CS1RR_uudd	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L u_R)(\bar{d}_L d_R)$	C
CS1RR_uuss	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L u_R)(\bar{s}_L s_R)$	C
CS8RR_uudd	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L T^A u_R)(\bar{d}_L T^A d_R)$	C
CS8RR_uuss	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L T^A u_R)(\bar{s}_L T^A s_R)$	C
CS1RR_dddd	$\frac{4G_F}{\sqrt{2}} (\bar{d}_L d_R)(\bar{d}_L d_R)$	C
CS1RR_ddss	$\frac{4G_F}{\sqrt{2}} (\bar{d}_L d_R)(\bar{s}_L s_R)$	C
CS1RR_dssd	$\frac{4G_F}{\sqrt{2}} (\bar{d}_L s_R)(\bar{s}_L d_R)$	C
CS1RR_ssss	$\frac{4G_F}{\sqrt{2}} (\bar{s}_L s_R)(\bar{s}_L s_R)$	C
CS8RR_dddd	$\frac{4G_F}{\sqrt{2}} (\bar{d}_L T^A d_R)(\bar{d}_L T^A d_R)$	C
CS8RR_ddss	$\frac{4G_F}{\sqrt{2}} (\bar{d}_L T^A d_R)(\bar{s}_L T^A s_R)$	C
CS8RR_dssd	$\frac{4G_F}{\sqrt{2}} (\bar{d}_L T^A s_R)(\bar{s}_L T^A d_R)$	C
CS8RR_ssss	$\frac{4G_F}{\sqrt{2}} (\bar{s}_L T^A s_R)(\bar{s}_L T^A s_R)$	C
CS1RR_uddu	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L d_R)(\bar{d}_L u_R)$	C
CS1RR_ussu	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L s_R)(\bar{s}_L u_R)$	C
CS8RR_uddu	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L T^A d_R)(\bar{d}_L T^A u_R)$	C
CS8RR_ussu	$\frac{4G_F}{\sqrt{2}} (\bar{u}_L T^A s_R)(\bar{s}_L T^A u_R)$	C

mue

WC name	Operator	Type
Cgamma_mue	$\bar{e}_L \sigma^{\mu\nu} \mu_R F_{\mu\nu}$	C
Cgamma_emu	$\bar{\mu}_L \sigma^{\mu\nu} e_R F_{\mu\nu}$	C
CVLL_eemue	$(\bar{e}_L \gamma^\mu e_L)(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLL_muemumu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{\mu}_L \gamma_\mu \mu_L)$	C
CVLL_mueuu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{u}_L \gamma_\mu u_L)$	C
CVLL_muedd	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{d}_L \gamma_\mu d_L)$	C
CVLL_muess	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{s}_L \gamma_\mu s_L)$	C
CVRR_eemue	$(\bar{e}_R \gamma^\mu e_R)(\bar{e}_R \gamma_\mu \mu_R)$	C
CVRR_muemumu	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{\mu}_R \gamma_\mu \mu_R)$	C
CVRR_mueuu	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{u}_R \gamma_\mu u_R)$	C
CVRR_muedd	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{d}_R \gamma_\mu d_R)$	C
CVRR_muess	$(\bar{e}_R \gamma^\mu \mu_R)(\bar{s}_R \gamma_\mu s_R)$	C
CVLR_eemue	$(\bar{e}_L \gamma^\mu e_L)(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_mueee	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{e}_R \gamma_\mu e_R)$	C
CVLR_muemumu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{\mu}_R \gamma_\mu \mu_R)$	C
CVLR_mumumue	$(\bar{\mu}_L \gamma^\mu \mu_L)(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_mueuu	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{u}_R \gamma_\mu u_R)$	C
CVLR_muedd	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{d}_R \gamma_\mu d_R)$	C
CVLR_muess	$(\bar{e}_L \gamma^\mu \mu_L)(\bar{s}_R \gamma_\mu s_R)$	C
CVLR_uumue	$(\bar{u}_L \gamma^\mu u_L)(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_ddmue	$(\bar{d}_L \gamma^\mu d_L)(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_ssmue	$(\bar{s}_L \gamma^\mu s_L)(\bar{e}_R \gamma_\mu \mu_R)$	C
CSRL_mueuu	$(\bar{e}_L \mu_R)(\bar{u}_R u_L)$	C
CSRL_emuuu	$(\bar{\mu}_L e_R)(\bar{u}_R u_L)$	C
CSRL_muedd	$(\bar{e}_L \mu_R)(\bar{d}_R d_L)$	C
CSRL_muess	$(\bar{e}_L \mu_R)(\bar{s}_R s_L)$	C
CSRL_emudd	$(\bar{\mu}_L e_R)(\bar{d}_R d_L)$	C
CSRL_emuss	$(\bar{\mu}_L e_R)(\bar{s}_R s_L)$	C
CSRR_eemue	$(\bar{e}_L e_R)(\bar{e}_L \mu_R)$	C
CSRR_eeemu	$(\bar{e}_L e_R)(\bar{\mu}_L e_R)$	C
CSRR_muemumu	$(\bar{e}_L \mu_R)(\bar{\mu}_L \mu_R)$	C
CSRR_emumumu	$(\bar{\mu}_L e_R)(\bar{\mu}_L \mu_R)$	C
CSRR_mueuu	$(\bar{e}_L \mu_R)(\bar{u}_L u_R)$	C
CSRR_emuuu	$(\bar{\mu}_L e_R)(\bar{u}_L u_R)$	C
CTRR_mueuu	$(\bar{e}_L \sigma^{\mu\nu} \mu_R)(\bar{u}_L \sigma_{\mu\nu} u_R)$	C
CTRR_emuuu	$(\bar{\mu}_L \sigma^{\mu\nu} e_R)(\bar{u}_L \sigma_{\mu\nu} u_R)$	C
CSRR_muedd	$(\bar{e}_L \mu_R)(\bar{d}_L d_R)$	C
CSRR_muess	$(\bar{e}_L \mu_R)(\bar{s}_L s_R)$	C
CSRR_emudd	$(\bar{\mu}_L e_R)(\bar{d}_L d_R)$	C
CSRR_emuss	$(\bar{\mu}_L e_R)(\bar{s}_L s_R)$	C
CTRR_muedd	$(\bar{e}_L \sigma^{\mu\nu} \mu_R)(\bar{d}_L \sigma_{\mu\nu} d_R)$	C
CTRR_muess	$(\bar{e}_L \sigma^{\mu\nu} \mu_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	C
CTRR_emudd	$(\bar{\mu}_L \sigma^{\mu\nu} e_R)(\bar{d}_L \sigma_{\mu\nu} d_R)$	C

WC name	Operator	Type
CTRR_emuss	$(\bar{\mu}_L \sigma^{\mu\nu} e_R)(\bar{s}_L \sigma_{\mu\nu} s_R)$	C

nunumue

WC name	Operator	Type
CVLL_nuenuemue	$(\bar{\nu}_{eL}\gamma^\mu \nu_{eL})(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLL_numunueemu	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\mu L})(\bar{\mu}_L \gamma_\mu e_L)$	C
CVLL_numunuemue	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\mu L})(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLL_numunumumue	$(\bar{\nu}_{\mu L}\gamma^\mu \nu_{\mu L})(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLL_nutaunueemu	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\tau L})(\bar{\mu}_L \gamma_\mu e_L)$	C
CVLL_nutaunuemue	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\tau L})(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLL_nutaunumuemu	$(\bar{\nu}_{\mu L}\gamma^\mu \nu_{\tau L})(\bar{\mu}_L \gamma_\mu e_L)$	C
CVLL_nutaunumumue	$(\bar{\nu}_{\mu L}\gamma^\mu \nu_{\tau L})(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLL_nutaunutaumue	$(\bar{\nu}_{\tau L}\gamma^\mu \nu_{\tau L})(\bar{e}_L \gamma_\mu \mu_L)$	C
CVLR_nuenuemue	$(\bar{\nu}_{eL}\gamma^\mu \nu_{eL})(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_numunueemu	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\mu L})(\bar{\mu}_R \gamma_\mu e_R)$	C
CVLR_numunuemue	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\mu L})(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_numunumumue	$(\bar{\nu}_{\mu L}\gamma^\mu \nu_{\mu L})(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_nutaunueemu	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\tau L})(\bar{\mu}_R \gamma_\mu e_R)$	C
CVLR_nutaunuemue	$(\bar{\nu}_{eL}\gamma^\mu \nu_{\tau L})(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_nutaunumuemu	$(\bar{\nu}_{\mu L}\gamma^\mu \nu_{\tau L})(\bar{\mu}_R \gamma_\mu e_R)$	C
CVLR_nutaunumumue	$(\bar{\nu}_{\mu L}\gamma^\mu \nu_{\tau L})(\bar{e}_R \gamma_\mu \mu_R)$	C
CVLR_nutaunutaumue	$(\bar{\nu}_{\tau L}\gamma^\mu \nu_{\tau L})(\bar{e}_R \gamma_\mu \mu_R)$	C