Basis `EOS` (EFT `WET`)

Basis used by the EOS package

Sectors

The effective Lagrangian is defined as

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

`sb`

WC name	Operator	Type
`b->s::c1`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* (\bar{s}_L \gamma^\mu T^a c_L)(\bar{c}_L \gamma_\mu T^a b_L)$	C
`b->s::c2`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* (\bar{s}_L \gamma^\mu c_L)(\bar{c}_L \gamma_\mu b_L)$	C
`b->s::c3`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* (\bar{s}_L \gamma^\mu b_L) \sum_q (\bar{q} \gamma_\mu q)$	C
`b->s::c4`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* (\bar{s}_L \gamma^\mu T^a b_L) \sum_q (\bar{q} \gamma_\mu T^a q)$	C
`b->s::c5`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* (\bar{s}_L \gamma^{\mu_1}\gamma^{\mu_2}\gamma^{\mu_3} b_L) \sum_q (\bar{q} \gamma_{\mu_1}\gamma_{\mu_2}\gamma_{\mu_3} q)$	C
`b->s::c6`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* (\bar{s}_L \gamma^{\mu_1}\gamma^{\mu_2}\gamma^{\mu_3} T^a b_L) \sum_q (\bar{q} \gamma_{\mu_1}\gamma_{\mu_2}\gamma_{\mu_3} T^a q)$	C
`b->s::c7`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e}{16\pi^2} m_b (\bar{s}_L \sigma_{\mu\nu} b_R) F^{\mu\nu}$	C
`b->s::c7'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e}{16\pi^2} m_b (\bar{s}_R \sigma_{\mu\nu} b_L) F^{\mu\nu}$	C
`b->s::c8`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{g_s}{16\pi^2} m_b (\bar{s}_L \sigma_{\mu\nu} T^a b_R) G^{a\mu\nu}$	C
`b->s::c8'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{g_s}{16\pi^2} m_b (\bar{s}_R \sigma_{\mu\nu} T^a b_L) G^{a\mu\nu}$	C
`b->see::c9`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu b_L)(\bar{e} \gamma_\mu e)$	C
`b->see::c9'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu b_R)(\bar{e} \gamma_\mu e)$	C
`b->see::c10`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu b_L)(\bar{e} \gamma_\mu \gamma_5 e)$	C
`b->see::c10'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu b_R)(\bar{e} \gamma_\mu \gamma_5 e)$	C
`b->see::cS`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b (\bar{s}_L b_R)(\bar{e} e)$	C
`b->see::cS'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b (\bar{s}_R b_L)(\bar{e} e)$	C
`b->see::cP`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b (\bar{s}_L b_R)(\bar{e} \gamma_5 e)$	C
`b->see::cP'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b (\bar{s}_R b_L)(\bar{e} \gamma_5 e)$	C
`b->see::cT`	$\frac{4G_F}{\sqrt{2}} V_{ub} \frac{e^2}{16\pi^2} (\bar{s} \sigma_{\mu\nu} b)(\bar{e} \sigma_{\mu\nu} e)$	C
`b->see::cT5`	$\frac{4G_F}{\sqrt{2}} V_{ub} \frac{e^2}{16\pi^2} (\bar{s} \sigma_{\mu\nu} b)(\bar{e} \sigma_{\mu\nu} \gamma_5 e)$	C
`b->smumu::c9`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu b_L)(\bar{\mu} \gamma_\mu \mu)$	C
`b->smumu::c9'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^\mu b_R)(\bar{\mu} \gamma_\mu \mu)$	C
`b->smumu::c10`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^\mu b_L)(\bar{\mu} \gamma_\mu \gamma_5 \mu)$	C

WC name	Operator	Type
`b->smumu::c10'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2}(\bar{s}_R\gamma^\mu b_R)(\bar{\mu}\gamma_\mu\gamma_5\mu)$	C
`b->smumu::cS`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_L b_R)(\bar{\mu}\mu)$	C
`b->smumu::cS'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_R b_L)(\bar{\mu}\mu)$	C
`b->smumu::cP`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_L b_R)(\bar{\mu}\gamma_5\mu)$	C
`b->smumu::cP'`	$\frac{4G_F}{\sqrt{2}} V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_R b_L)(\bar{\mu}\gamma_5\mu)$	C
`b->smumu::cT`	$\frac{4G_F}{\sqrt{2}} V_{ub} \frac{e^2}{16\pi^2}(\bar{s}\sigma_{\mu\nu} b)(\bar{\mu}\sigma_{\mu\nu}\mu)$	C
`b->smumu::cT5`	$\frac{4G_F}{\sqrt{2}} V_{ub} \frac{e^2}{16\pi^2}(\bar{s}\sigma_{\mu\nu} b)(\bar{\mu}\sigma_{\mu\nu}\gamma_5\mu)$	C

`cbenu`

WC name	Operator	Type
`b->cenue::cVL`	$-\frac{4G_F}{\sqrt{2}} V_{cb}(\bar{c}_L\gamma^\mu b_L)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
`b->cenue::cVR`	$-\frac{4G_F}{\sqrt{2}} V_{cb}(\bar{c}_R\gamma^\mu b_R)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
`b->cenue::cSR`	$-\frac{4G_F}{\sqrt{2}} V_{cb}(\bar{c}_L b_R)(\bar{e}_R\nu_{eL})$	C
`b->cenue::cSL`	$-\frac{4G_F}{\sqrt{2}} V_{cb}(\bar{c}_R b_L)(\bar{e}_R\nu_{eL})$	C
`b->cenue::cT`	$-\frac{4G_F}{\sqrt{2}} V_{cb}(\bar{c}_R\sigma^{\mu\nu} b_L)(\bar{e}_R\sigma_{\mu\nu}\nu_{eL})$	C

`cbmunu`

WC name	Operator	Type
`b->cmunumu::cVL`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{c}_L\gamma^\mu b_L)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	C
`b->cmunumu::cVR`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{c}_R\gamma^\mu b_R)(\bar{\mu}_L\gamma_\mu\nu_{\mu L})$	C
`b->cmunumu::cSR`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{c}_L b_R)(\bar{\mu}_R\nu_{\mu L})$	C
`b->cmunumu::cSL`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{c}_R b_L)(\bar{\mu}_R\nu_{\mu L})$	C
`b->cmunumu::cT`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{c}_R\sigma^{\mu\nu} b_L)(\bar{\mu}_R\sigma_{\mu\nu}\nu_{\mu L})$	C

`ubenu`

WC name	Operator	Type
`b->uenue::cVL`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{u}_L\gamma^\mu b_L)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
`b->uenue::cVR`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{u}_R\gamma^\mu b_R)(\bar{e}_L\gamma_\mu\nu_{eL})$	C
`b->uenue::cSR`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{u}_L b_R)(\bar{e}_R\nu_{eL})$	C
`b->uenue::cSL`	$-\frac{4G_F}{\sqrt{2}} V_{ub}(\bar{u}_R b_L)(\bar{e}_R\nu_{eL})$	C

WC name	Operator	Type
`b->uenue::cT`	$-\frac{4G_F}{\sqrt{2}} V_{ub} (\bar{u}_R \sigma^{\mu\nu} b_L)(\bar{e}_R \sigma_{\mu\nu} \nu_{eL})$	C

`ubmunu`

WC name	Operator	Type
`b->umunumu::cVL`	$-\frac{4G_F}{\sqrt{2}} V_{ub} (\bar{u}_L \gamma^\mu b_L)(\bar{\mu}_L \gamma_\mu \nu_{\mu L})$	C
`b->umunumu::cVR`	$-\frac{4G_F}{\sqrt{2}} V_{ub} (\bar{u}_R \gamma^\mu b_R)(\bar{\mu}_L \gamma_\mu \nu_{\mu L})$	C
`b->umunumu::cSR`	$-\frac{4G_F}{\sqrt{2}} V_{ub} (\bar{u}_L b_R)(\bar{\mu}_R \nu_{\mu L})$	C
`b->umunumu::cSL`	$-\frac{4G_F}{\sqrt{2}} V_{ub} (\bar{u}_R b_L)(\bar{\mu}_R \nu_{\mu L})$	C
`b->umunumu::cT`	$-\frac{4G_F}{\sqrt{2}} V_{ub} (\bar{u}_R \sigma^{\mu\nu} b_L)(\bar{\mu}_R \sigma_{\mu\nu} \nu_{\mu L})$	C