# Basis EOS (EFT WET)

Basis used by the EOS package

# Sectors

## sb

WC name	Operator	Type
b->s::c1	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}T^ac_L)(\bar{c}_L\gamma_{\mu}T^ab_L)$	С
b->s::c2	$\frac{4\tilde{G}_F^2}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^\mu c_L)(\bar{c}_L\gamma_\mu b_L)$	$\mathbf{C}$
b->s::c3	$\frac{4 \check{G}_F}{\sqrt{2}} V_{tb} V_{ts}^* (\bar{s}_L \gamma^\mu b_L) \sum_q (\bar{q} \gamma_\mu q)$	$\mathbf{C}$
b->s::c4	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu}T^ab_L)\sum_q(\bar{q}\gamma_{\mu}T^aq)$	$\mathbf{C}$
b->s::c5	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*(\bar{s}_L\gamma^{\mu_1}\gamma^{\mu_2}\gamma^{\mu_3}b_L)\sum_q(\bar{q}\gamma_{\mu_1}\gamma_{\mu_2}\gamma_{\mu_3}q)$	$\mathbf{C}$
b->s::c6	$\frac{4G_F}{\sqrt{2}} V_{tb} V_{ts}^* (\bar{s}_L \gamma^{\mu_1} \gamma^{\mu_2} \gamma^{\mu_3} T^a b_L) \sum_q (\bar{q} \gamma_{\mu_1} \gamma_{\mu_2} \gamma_{\mu_3} T^a c_L) \sum_q (\bar{q} \gamma_{\mu_1} \gamma_{\mu_2} \gamma_{\mu_3} T^a c_L)$	I)C
b->s::c7	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e}{16\pi^2} m_b(\bar{s}_L \sigma_{\mu\nu} b_R) F^{\mu\nu}$	$\mathbf{C}$
b->s::c7'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e}{16\pi^2} m_b(\bar{s}_R \sigma_{\mu\nu} b_L) F^{\mu\nu}$	$\mathbf{C}$
b->s::c8	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{g_s}{16\pi^2}m_b(\bar{s}_L\sigma_{\mu\nu}T^ab_R)G^{a\mu\nu}$	$\mathbf{C}$
b->s::c8'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{g_s}{16\pi^2} m_b(\bar{s}_R \sigma_{\mu\nu} T^a b_L) G^{a\mu\nu}$	$\mathbf{C}$
b->see::c9	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^\mu b_L)(\bar{e}\gamma_\mu e)$	$\mathbf{C}$
b->see::c9'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{e}\gamma_{\mu}e)$	$\mathbf{C}$
b->see::c10	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_L\gamma^{\mu}b_L)(\bar{e}\gamma_{\mu}\gamma_5 e)$	$\mathbf{C}$
b->see::c10'	$\frac{4\dot{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}(\bar{s}_{R}\gamma^{\mu}b_{R})(\bar{e}\gamma_{\mu}\gamma_{5}e)$	$\mathbf{C}$
b->see::cS	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Lb_R)(\bar{e}e)$	$\mathbf{C}$
b->see::cS'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{e}e)$	$\mathbf{C}$
b->see::cP	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} m_b(\bar{s}_L b_R)(\bar{e}\gamma_5 e)$	$\mathbf{C}$
b->see::cP'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{e}\gamma_5e)$	$\mathbf{C}$
b->see::cT	$\frac{4G_F}{\sqrt{2}}V_{ub}\frac{e^2}{16\pi^2}(\bar{s}\sigma_{\mu\nu}b)(\bar{e}\sigma_{\mu\nu}e)$	$\mathbf{C}$
b->see::cT5	$\frac{4G_F}{\sqrt{2}}V_{ub}\frac{e^2}{16\pi^2}(ar{s}\sigma_{\mu\nu}b)(ar{e}\sigma_{\mu\nu}\gamma_5 e)$	$\mathbf{C}$
b->smumu::c9	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L) (\bar{\mu} \gamma_{\mu} \mu)$	$\mathbf{C}$
b->smumu::c9'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_R \gamma^{\mu} b_R) (\bar{\mu} \gamma_{\mu} \mu)$	$\mathbf{C}$
b->smumu::c10	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^* \frac{e^2}{16\pi^2} (\bar{s}_L \gamma^{\mu} b_L) (\bar{\mu} \gamma_{\mu} \gamma_5 \mu)$	$\mathbf{C}$
b->smumu::c10'	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}(\bar{s}_R\gamma^{\mu}b_R)(\bar{\mu}\gamma_{\mu}\gamma_5\mu)$	$\mathbf{C}$
b->smumu::cS	$\frac{4\dot{G}_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_L b_R)(\bar{\mu}\mu)$	$\mathbf{C}$
b->smumu::cS'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\mu}\mu)$	$\mathbf{C}$
b->smumu::cP	$\frac{4\tilde{G}_{F}}{\sqrt{2}}V_{tb}V_{ts}^{*}\frac{e^{2}}{16\pi^{2}}m_{b}(\bar{s}_{L}b_{R})(\bar{\mu}\gamma_{5}\mu)$	$\mathbf{C}$

WC name	Operator	Type
b->smumu::cP'	$\frac{4G_F}{\sqrt{2}}V_{tb}V_{ts}^*\frac{e^2}{16\pi^2}m_b(\bar{s}_Rb_L)(\bar{\mu}\gamma_5\mu)$	C
b->smumu::cT	$\frac{4G_F}{\sqrt{2}}V_{ub}\frac{e^2}{16\pi^2}(\bar{s}\sigma_{\mu\nu}b)(\bar{\mu}\sigma_{\mu\nu}\mu)$	$\mathbf{C}$
b->smumu::cT5	$rac{4G_F}{\sqrt{2}}V_{ub}rac{e^2}{16\pi^2}(ar{s}\sigma_{\mu u}b)(ar{\mu}\sigma_{\mu u}\gamma_5\mu)$	$\mathbf{C}$

#### ubenu

WC name	Operator	Type
b->uenue::cVL	$-rac{4G_F}{\sqrt{2}}V_{ub}(ar{u}_L\gamma^\mu b_L)(ar{e}_L\gamma_\mu u_{eL})$	
b->uenue::cVR	$-rac{4\overset{\sim}{G_E}}{\sqrt{2}}V_{ub}(ar{u}_R\gamma^\mu b_R)(ar{e}_L\gamma_\mu u_{eL})$	$\mathbf{C}$
b->uenue::cSR	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{e}_R\nu_{eL})$	$\mathbf{C}$
b->uenue::cSL	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Rb_L)(\bar{e}_R\nu_{eL})$	$\mathbf{C}$
b->uenue::cT	$-rac{4G_F}{\sqrt{2}}V_{ub}(ar{u}_R\sigma^{\mu u}b_L)(ar{e}_R\sigma_{\mu u} u_{eL})$	$\mathbf{C}$

### 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	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_L\gamma^{\mu}b_L)(\bar{\mu}_L\gamma_{\mu}\nu_{\mu L}) \\ -\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_R\gamma^{\mu}b_R)(\bar{\mu}_L\gamma_{\mu}\nu_{\mu L})$	$\mathbf{C}$
b->umunumu::cSR	$-\frac{4G_F}{\sqrt{2}}V_{ub}(\bar{u}_Lb_R)(\bar{\mu}_R\nu_{\mu L})$	$\mathbf{C}$
b->umunumu::cSL	$-rac{4ar{G}_F}{\sqrt{2}}V_{ub}(ar{u}_Rb_L)(ar{\mu}_R u_{\mu L})$	$\mathbf{C}$
b->umunumu::cT	$-rac{4\overset{\sim}{\mathcal{G}_F}}{\sqrt{2}}V_{ub}(ar{u}_R\sigma^{\mu u}b_L)(ar{\mu}_R\sigma_{\mu u} u_{\mu L})$	$^{\mathrm{C}}$