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[FFS] 2 Leptons – Higgs

$$C_1(e_{j1}, \bar{e}_{j2}, h^0) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} m_t} \\ -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} m_t} \end{bmatrix}$$

$$C_4(e_{j1}, \bar{e}_{j2}, A^0) = \begin{bmatrix} \frac{\delta_{j1,j2} m_{e_{j1}} h_t s_\beta^2}{\sqrt{2} c_\beta m_t} \\ -\frac{\delta_{j1,j2} m_{e_{j1}} h_t s_\beta^2}{\sqrt{2} c_\beta m_t} \end{bmatrix}$$

$$C_5(e_{j1}, \bar{e}_{j2}, G^0) = \begin{bmatrix} -\frac{\delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} m_t} \\ \frac{\delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} m_t} \end{bmatrix}$$

$$C_6(\nu_{j1}, \bar{e}_{j2}, H^-) = \begin{bmatrix} \frac{i \delta_{j1,j2} m_{e_{j2}} h_t s_\beta^2}{c_\beta m_t} \\ 0 \end{bmatrix}$$

$$C_7(\nu_{j1}, \bar{e}_{j2}, G^-) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{e_{j2}} h_t s_\beta}{m_t} \\ 0 \end{bmatrix}$$

$$C_8(e_{j1}, \bar{\nu}_{j2}, H^+) = \begin{bmatrix} 0 \\ \frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta^2}{c_\beta m_t} \end{bmatrix}$$

$$C_9(e_{j1}, \bar{\nu}_{j2}, G^+) = \begin{bmatrix} 0 \\ -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{m_t} \end{bmatrix}$$

$$C_{14}(e_{j1}, \bar{e}_{j2}, H^0) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta^2}{\sqrt{2} c_\beta m_t} \\ -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta^2}{\sqrt{2} c_\beta m_t} \end{bmatrix}$$

[FFS] 2 Quarks – Higgs

$$C_2(u_{j1}, \bar{u}_{j2}, h^0) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{u_{j1}} h_t s_\beta}{\sqrt{2} m_t} \\ -\frac{i \delta_{j1,j2} m_{u_{j1}} h_t s_\beta}{\sqrt{2} m_t} \end{bmatrix}$$

$$C_{10}(u_{j1}, \bar{u}_{j2}, A^0) = \begin{bmatrix} \frac{c_\beta \delta_{j1,j2} m_{u_{j1}} h_t}{\sqrt{2} m_t} \\ -\frac{c_\beta \delta_{j1,j2} m_{u_{j1}} h_t}{\sqrt{2} m_t} \end{bmatrix}$$

$$C_{11}(u_{j1}, \bar{u}_{j2}, G^0) = \begin{bmatrix} \frac{\delta_{j1,j2} m_{u_{j1}} h_t s_\beta}{\sqrt{2} m_t} \\ -\frac{\delta_{j1,j2} m_{u_{j1}} h_t s_\beta}{\sqrt{2} m_t} \end{bmatrix}$$

$$C_{15}(u_{j1}, \bar{u}_{j2}, H^0) = \begin{bmatrix} \frac{i c_\beta \delta_{j1,j2} m_{u_{j1}} h_t}{\sqrt{2} m_t} \\ \frac{i c_\beta \delta_{j1,j2} m_{u_{j1}} h_t}{\sqrt{2} m_t} \end{bmatrix}$$

$$C_{17}(u_{j1}, \bar{d}_{j2}, H^-) = \begin{bmatrix} 0 \\ \frac{i c_\beta m_{u_{j1}} \text{CKM}_{j1,j2}^* h_t}{m_t} \end{bmatrix}$$

$$C_{18}(u_{j1}, \bar{d}_{j2}, G^-) = \begin{bmatrix} 0 \\ \frac{i m_{u_{j1}} \text{CKM}_{j1,j2}^* h_t s_\beta}{m_t} \end{bmatrix}$$

$$C_{19}(d_{j1}, \bar{u}_{j2}, H^+) = \begin{bmatrix} \frac{i c_\beta m_{u_{j2}} \text{CKM}_{j2,j1} h_t}{m_t} \\ 0 \end{bmatrix}$$

$$C_{20}(d_{j1}, \bar{u}_{j2}, G^+) = \begin{bmatrix} \frac{i m_{u_{j2}} \text{CKM}_{j2,j1} h_t s_\beta}{m_t} \\ 0 \end{bmatrix}$$

[FFS] Chargino – Lepton – Slepton

$$C_{49}(\tilde{\chi}_{c1}^-, \bar{e}_{j2}, \tilde{\nu}_{j1}) = \begin{bmatrix} \frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{c1,2}^*}{c_\beta m_t} \\ 0 \end{bmatrix}$$

$$C_{50}(\tilde{\chi}_{c1}^+, \bar{\nu}_{j1}, \tilde{e}_{j2}^{s2}) = \begin{bmatrix} 0 \\ \frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{c1,2} U_{s2,2}^{\tilde{e}_{j1}*}}{c_\beta m_t} \end{bmatrix}$$

$$C_{53}(e_{j2}, \tilde{\chi}_{c1}^+, \tilde{\nu}_{j1}^\dagger) = \begin{bmatrix} 0 \\ \frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{c1,2}}{c_\beta m_t} \end{bmatrix}$$

$$C_{54}(\nu_{j1}, \tilde{\chi}_{c1}^-, \tilde{e}_{j2}^{s2,\dagger}) = \begin{bmatrix} \frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{c1,2}^* U_{s2,2}^{\tilde{e}_{j1}}}{c_\beta m_t} \\ 0 \end{bmatrix}$$

[FFS] Chargino – Quark – Squark

$$C_{47}(\tilde{\chi}_{c1}^-, \bar{d}_{j2}, \tilde{u}_{j1}^{s1}) = \begin{bmatrix} 0 \\ \frac{i \delta_{c1,2} m_{u_{j1}} \text{CKM}_{j1,j2}^* h_t U_{s1,2}^{\tilde{u},j1*}}{m_t} \end{bmatrix}$$

$$C_{48}(\tilde{\chi}_{c1}^+, \bar{u}_{j1}, \tilde{d}_{j2}^{s2}) = \begin{bmatrix} \frac{i \delta_{c1,2} m_{u_{j1}} \text{CKM}_{j1,j2} h_t U_{s2,1}^{\tilde{d},j2*}}{m_t} \\ 0 \end{bmatrix}$$

$$C_{51}(d_{j2}, \tilde{\chi}_{c1}^+, \tilde{u}_{j1}^{s1,\dagger}) = \begin{bmatrix} \frac{i \delta_{c1,2} m_{u_{j1}} \text{CKM}_{j1,j2} h_t U_{s1,2}^{\tilde{u},j1}}{m_t} \\ 0 \end{bmatrix}$$

$$C_{52}(u_{j1}, \tilde{\chi}_{c1}^-, \tilde{d}_{j2}^{s2,\dagger}) = \begin{bmatrix} 0 \\ \frac{i \delta_{c1,2} m_{u_{j1}} \text{CKM}_{j1,j2}^* h_t U_{s2,1}^{\tilde{d},j2}}{m_t} \end{bmatrix}$$

[FFS] Lepton – Neutralino – Slepton

$$C_{41}(\tilde{\chi}_{n1}^0, \bar{e}_{j1}, \tilde{e}_{j2}^{s2}) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{s2,1}^{\tilde{e},j1*} Z_{n1,3}^*}{c_\beta m_t} \\ -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{s2,2}^{\tilde{e},j1*} Z_{n1,3}}{c_\beta m_t} \end{bmatrix}$$

$$C_{44}(e_{j1}, \tilde{\chi}_{n1}^0, \tilde{e}_{j2}^{s2,\dagger}) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{s2,2}^{\tilde{e},j1} Z_{n1,3}^*}{c_\beta m_t} \\ -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta U_{s2,1}^{\tilde{e},j1} Z_{n1,3}}{c_\beta m_t} \end{bmatrix}$$

[FFS] Neutralino – Quark – Squark

$$C_{42}(\tilde{\chi}_{n1}^0, \bar{u}_{j1}, \tilde{u}_{j2}^{s2}) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{u_{j1}} h_t U_{s2,1}^{\tilde{u},j1*} Z_{n1,4}^*}{m_t} \\ -\frac{i \delta_{j1,j2} m_{u_{j1}} h_t U_{s2,2}^{\tilde{u},j1*} Z_{n1,4}}{m_t} \end{bmatrix}$$

$$C_{45}(u_{j1}, \tilde{\chi}_{n1}^0, \tilde{u}_{j2}^{s2,\dagger}) = \begin{bmatrix} -\frac{i \delta_{j1,j2} m_{u_{j1}} h_t U_{s2,2}^{\tilde{u},j1} Z_{n1,4}^*}{m_t} \\ -\frac{i \delta_{j1,j2} m_{u_{j1}} h_t U_{s2,1}^{\tilde{u},j1} Z_{n1,4}}{m_t} \end{bmatrix}$$

[SSS] Higgs – 2 Sleptons

$$C_{21}(A^0, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{\delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} c_\beta m_t} \left(U_{s1,2}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} (c_\beta \mu + A_{j1,j1}^{e*} s_\beta) - U_{s1,1}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1} (c_\beta \mu^* + A_{j1,j1}^e s_\beta) \right)$$

$$C_{22}(G^0, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{\delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} c_\beta m_t} \left(U_{s1,1}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1} (A_{j1,j1}^e c_\beta - \mu^* s_\beta) - U_{s1,2}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} (A_{j1,j1}^{e*} c_\beta - \mu s_\beta) \right)$$

$$C_{27}(h^0, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{e_{j1}} h_t s_\beta}{\sqrt{2} c_\beta m_t} \left\{ U_{s1,1}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1} (A_{j1,j1}^e c_\beta - \mu^* s_\beta) + U_{s1,2}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} (A_{j1,j1}^{e*} c_\beta - \mu s_\beta) + \right. \\ \left. 2 c_\beta m_{e_{j1}} \left(U_{s1,1}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} + U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1} \right) \right\}$$

$$C_{28}(H^0, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{e_{j1}} \textcolor{red}{h}_t s_\beta}{\sqrt{2} c_\beta m_t} \left\{ \frac{U_{s1,2}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} (c_\beta \mu + A_{j1,j1}^{e*} s_\beta) + U_{s1,1}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1} (c_\beta \mu^* + A_{j1,j1}^e s_\beta) +}{2 m_{e_{j1}} s_\beta (U_{s1,1}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} + U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1})} \right\}$$

$$C_{35}(H^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = \frac{i \delta_{j1,j2} m_{e_{j1}} \textcolor{red}{h}_t s_\beta}{c_\beta m_t} (m_{e_{j1}} s_\beta U_{s2,1}^{\tilde{e},j1*} + U_{s2,2}^{\tilde{e},j1*} (c_\beta \mu + A_{j1,j1}^{e*} s_\beta))$$

$$C_{36}(H^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = \frac{i \delta_{j1,j2} m_{e_{j1}} \textcolor{red}{h}_t s_\beta}{c_\beta m_t} (m_{e_{j1}} s_\beta U_{s2,1}^{\tilde{e},j1} + U_{s2,2}^{\tilde{e},j1} (c_\beta \mu^* + A_{j1,j1}^e s_\beta))$$

$$C_{39}(G^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = -\frac{i \delta_{j1,j2} m_{e_{j1}} \textcolor{red}{h}_t s_\beta}{c_\beta m_t} (c_\beta m_{e_{j1}} U_{s2,1}^{\tilde{e},j1*} + U_{s2,2}^{\tilde{e},j1*} (A_{j1,j1}^{e*} c_\beta - \mu s_\beta))$$

$$C_{40}(G^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{e_{j1}} \textcolor{red}{h}_t s_\beta}{c_\beta m_t} (c_\beta m_{e_{j1}} U_{s2,1}^{\tilde{e},j1} + U_{s2,2}^{\tilde{e},j1} (A_{j1,j1}^e c_\beta - \mu^* s_\beta))$$

[SSS] Higgs – 2 Squarks

$$C_{23}(A^0, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = \frac{c_\beta \delta_{j1,j2} m_{u_{j1}} \textcolor{red}{h}_t}{\sqrt{2} m_t} (U_{s1,1}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1} Y_t - U_{s1,2}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} Y_t^*)$$

$$C_{24}(G^0, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = \frac{\delta_{j1,j2} m_{u_{j1}} \textcolor{red}{h}_t s_\beta}{\sqrt{2} m_t} (U_{s1,1}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1} X_t - U_{s1,2}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} X_t^*)$$

$$C_{29}(h^0, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{u_{j1}} \textcolor{red}{h}_t s_\beta}{\sqrt{2} m_t} (U_{s1,1}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1} X_t + U_{s1,2}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} X_t^* + 2 m_{u_{j1}} (U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} + U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1}))$$

$$C_{30}(H^0, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = \frac{i c_\beta \delta_{j1,j2} m_{u_{j1}} \textcolor{red}{h}_t}{\sqrt{2} m_t} (U_{s1,1}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1} Y_t + U_{s1,2}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} Y_t^* + 2 m_{u_{j1}} (U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} + U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1}))$$

$$C_{33}(H^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{i c_\beta m_{u_{j1}} \text{CKM}_{j1,j2} \textcolor{red}{h}_t U_{s2,1}^{\tilde{d},j2*}}{m_t} (m_{u_{j1}} U_{s1,1}^{\tilde{u},j1} + U_{s1,2}^{\tilde{u},j1} Y_t)$$

$$C_{34}(H^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = \frac{i c_\beta m_{u_{j1}} \text{CKM}_{j1,j2}^* \textcolor{red}{h}_t U_{s2,1}^{\tilde{d},j2}}{m_t} (m_{u_{j1}} U_{s1,1}^{\tilde{u},j1*} + U_{s1,2}^{\tilde{u},j1*} Y_t^*)$$

$$C_{37}(G^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{i m_{u_{j1}} \text{CKM}_{j1,j2} h_t s_\beta U_{s2,1}^{\tilde{d},j2*}}{m_t} \left(m_{u_{j1}} U_{s1,1}^{\tilde{u},j1} + U_{s1,2}^{\tilde{u},j1} X_t \right)$$

$$C_{38}(G^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = \frac{i m_{u_{j1}} \text{CKM}_{j1,j2}^* h_t s_\beta U_{s2,1}^{\tilde{d},j2}}{m_t} \left(m_{u_{j1}} U_{s1,1}^{\tilde{u},j1*} + U_{s1,2}^{\tilde{u},j1*} X_t^* \right)$$

[SSSS] 2 Higgs – 2 Sleptons

$$C_{55}(h^0, h^0, \tilde{e}_{j2}^{s2}, \tilde{e}_{j1}^{s1,\dagger}) = -\frac{i \delta_{j1,j2}}{c_W^2 s_W^2} \left(\frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{e},j1} U_{s2,1}^{\tilde{e},j1*}}{m_t^2} + \frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{e},j1} U_{s2,2}^{\tilde{e},j1*}}{m_t^2} \right)$$

$$C_{57}(H^0, H^0, \tilde{e}_{j2}^{s2}, \tilde{e}_{j1}^{s1,\dagger}) = -\frac{i \delta_{j1,j2}}{c_\beta^2 c_W^2 s_W^2} \left(\frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^4 s_W^2 U_{s1,1}^{\tilde{e},j1} U_{s2,1}^{\tilde{e},j1*}}{m_t^2} + \frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^4 s_W^2 U_{s1,2}^{\tilde{e},j1} U_{s2,2}^{\tilde{e},j1*}}{m_t^2} \right)$$

$$C_{59}(A^0, A^0, \tilde{e}_{j2}^{s2}, \tilde{e}_{j1}^{s1,\dagger}) = -\frac{i \delta_{j1,j2}}{c_\beta^2 c_W^2 s_W^2} \left(\frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^4 s_W^2 U_{s1,1}^{\tilde{e},j1} U_{s2,1}^{\tilde{e},j1*}}{m_t^2} + \frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^4 s_W^2 U_{s1,2}^{\tilde{e},j1} U_{s2,2}^{\tilde{e},j1*}}{m_t^2} \right)$$

$$C_{60}(G^0, G^0, \tilde{e}_{j2}^{s2}, \tilde{e}_{j1}^{s1,\dagger}) = -\frac{i \delta_{j1,j2}}{c_W^2 s_W^2} \left(\frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{e},j1} U_{s2,1}^{\tilde{e},j1*}}{m_t^2} + \frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{e},j1} U_{s2,2}^{\tilde{e},j1*}}{m_t^2} \right)$$

$$C_{61}(A^0, G^0, \tilde{e}_{j2}^{s2}, \tilde{e}_{j1}^{s1,\dagger}) = \frac{i \delta_{j1,j2} s_{2\beta}}{2 c_\beta^2 c_W^2 s_W^2} \left(\frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{e},j1} U_{s2,1}^{\tilde{e},j1*}}{m_t^2} + \frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{e},j1} U_{s2,2}^{\tilde{e},j1*}}{m_t^2} \right)$$

$$C_{65}(h^0, H^0, \tilde{e}_{j2}^{s2}, \tilde{e}_{j1}^{s1,\dagger}) = -\frac{i \delta_{j1,j2} s_{2\beta}}{2 c_\beta^2 c_W^2 s_W^2} \left(\frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{e},j1} U_{s2,1}^{\tilde{e},j1*}}{m_t^2} + \frac{c_W^2 m_{e_{j1}}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{e},j1} U_{s2,2}^{\tilde{e},j1*}}{m_t^2} \right)$$

$$C_{79}(h^0, H^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = \frac{i \delta_{j1,j2} m_{e_{j1}}^2 h_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{80}(h^0, G^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_\beta^2 U_{s2,1}^{\tilde{e},j1}}{\sqrt{2} m_t^2}$$

$$C_{81}(h^0, H^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = \frac{i \delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1*}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{82}(h^0, G^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = -\frac{i \delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_\beta^2 U_{s2,1}^{\tilde{e},j1*}}{\sqrt{2} m_t^2}$$

$$C_{83}(A^0, H^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = \frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_\beta^4 U_{s2,1}^{\tilde{e},j1}}{\sqrt{2} c_\beta^2 m_t^2}$$

$$C_{84}(G^0, G^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = \frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_\beta^2 U_{s2,1}^{\tilde{e},j1}}{\sqrt{2} m_t^2}$$

$$C_{85}(A^0, G^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{86}(G^0, H^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2,\dagger}) = -\frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{87}(A^0, H^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = -\frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_\beta^4 U_{s2,1}^{\tilde{e},j1*}}{\sqrt{2} c_\beta^2 m_t^2}$$

$$C_{88}(G^0, G^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = -\frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_\beta^2 U_{s2,1}^{\tilde{e},j1*}}{\sqrt{2} m_t^2}$$

$$C_{89}(A^0, G^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = \frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1*}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{90}(G^0, H^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = \frac{\delta_{j1,j2} m_{e_1}^2 \textcolor{red}{h}_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1*}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{95}(H^0, H^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2, \dagger}) = \frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_\beta^4 U_{s2,1}^{\tilde{e},j1}}{\sqrt{2} c_\beta^2 m_t^2}$$

$$C_{96}(H^0, G^-, \tilde{\nu}_{j1}, \tilde{e}_{j2}^{s2, \dagger}) = -\frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{97}(H^0, H^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = \frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_\beta^4 U_{s2,1}^{\tilde{e},j1*}}{\sqrt{2} c_\beta^2 m_t^2}$$

$$C_{98}(H^0, G^+, \tilde{e}_{j2}^{s2}, \tilde{\nu}_{j1}^\dagger) = -\frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_{2\beta} s_\beta^2 U_{s2,1}^{\tilde{e},j1*}}{2 \sqrt{2} c_\beta^2 m_t^2}$$

$$C_{99}(H^-, H^+, \tilde{\nu}_{j1}, \tilde{\nu}_{j2}^\dagger) = -\frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_\beta^4}{c_\beta^2 m_t^2}$$

$$C_{100}(G^-, G^+, \tilde{\nu}_{j1}, \tilde{\nu}_{j2}^\dagger) = -\frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_\beta^2}{m_t^2}$$

$$C_{101}(H^-, G^+, \tilde{\nu}_{j1}, \tilde{\nu}_{j2}^\dagger) = \frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_{2\beta} s_\beta^2}{2 c_\beta^2 m_t^2}$$

$$C_{102}(G^-, H^+, \tilde{\nu}_{j1}, \tilde{\nu}_{j2}^\dagger) = \frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_{2\beta} s_\beta^2}{2 c_\beta^2 m_t^2}$$

$$C_{103}(H^-, H^+, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2, \dagger}) = -\frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_\beta^4 U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1}}{c_\beta^2 m_t^2}$$

$$C_{104}(G^-, G^+, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2, \dagger}) = -\frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_\beta^2 U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1}}{m_t^2}$$

$$C_{105}(H^-, G^+, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2, \dagger}) = \frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_{2\beta} s_\beta^2 U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1}}{2 c_\beta^2 m_t^2}$$

$$C_{106}(G^-, H^+, \tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2, \dagger}) = \frac{i \delta_{j1,j2} m_{e_1}^2 h_t^2 s_{2\beta} s_\beta^2 U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1}}{2 c_\beta^2 m_t^2}$$

[SSSS] 2 Higgs – 2 Squarks

$$C_{56}(h^0, h^0, \tilde{u}_{j2}^{s2}, \tilde{u}_{j1}^{s1, \dagger}) = -\frac{i \delta_{j1,j2}}{3 c_W^2 s_W^2} \left(\frac{3 c_W^2 m_{u_1}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{u},j1*}}{m_t^2} + \frac{3 c_W^2 m_{u_1}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{u},j1} U_{s2,2}^{\tilde{u},j1*}}{m_t^2} \right)$$

$$C_{58}(H^0, H^0, \tilde{u}_{j2}^{s2}, \tilde{u}_{j1}^{s1, \dagger}) = -\frac{i \delta_{j1,j2}}{12 c_W^2 s_\beta^2 s_W^2} \left(\frac{3 c_W^2 m_{u_1}^2 h_t^2 s_{2\beta}^2 s_W^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{u},j1*}}{m_t^2} + \frac{3 c_W^2 m_{u_1}^2 h_t^2 s_{2\beta}^2 s_W^2 U_{s1,2}^{\tilde{u},j1} U_{s2,2}^{\tilde{u},j1*}}{m_t^2} \right)$$

$$C_{62}(A^0, A^0, \tilde{u}_{j2}^{s2}, \tilde{u}_{j1}^{s1, \dagger}) = -\frac{i \delta_{j1,j2}}{12 c_W^2 s_\beta^2 s_W^2} \left(\frac{3 c_W^2 m_{u_1}^2 h_t^2 s_{2\beta}^2 s_W^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{u},j1*}}{m_t^2} + \frac{3 c_W^2 m_{u_1}^2 h_t^2 s_{2\beta}^2 s_W^2 U_{s1,2}^{\tilde{u},j1} U_{s2,2}^{\tilde{u},j1*}}{m_t^2} \right)$$

$$C_{63}(G^0, G^0, \tilde{u}_{j2}^{s2}, \tilde{u}_{j1}^{s1, \dagger}) = -\frac{i \delta_{j1,j2}}{3 c_W^2 s_W^2} \left(\frac{3 c_W^2 m_{u_1}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{u},j1*}}{m_t^2} + \frac{3 c_W^2 m_{u_1}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{u},j1} U_{s2,2}^{\tilde{u},j1*}}{m_t^2} \right)$$

$$C_{64}(A^0, G^0, \tilde{u}_{j2}^{s2}, \tilde{u}_{j1}^{s1, \dagger}) = -\frac{i \delta_{j1,j2}}{3 c_W^2 s_\beta s_W^2} \left(\frac{3 c_\beta c_W^2 m_{u_1}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{u},j1*}}{m_t^2} + \frac{3 c_\beta c_W^2 m_{u_1}^2 h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{u},j1} U_{s2,2}^{\tilde{u},j1*}}{m_t^2} \right)$$

$$C_{66}(h^0, H^0, \tilde{u}_{j2}^{s2}, \tilde{u}_{j1}^{s1, \dagger}) = \frac{i \delta_{j1,j2} s_{2\beta}}{6 c_W^2 s_W^2} \left(\frac{3 c_W^2 m_{u_1}^2 h_t^2 s_W^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{u},j1*}}{m_t^2} + \frac{3 c_W^2 m_{u_1}^2 h_t^2 s_W^2 U_{s1,2}^{\tilde{u},j1} U_{s2,2}^{\tilde{u},j1*}}{m_t^2} \right)$$

$$C_{67}(h^0, H^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2, \dagger}) = \frac{i m_{u_1}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{2\beta} U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{2 \sqrt{2} m_t^2}$$

$$C_{68}(h^0, G^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2, \dagger}) = \frac{i m_{u_1}^2 \text{CKM}_{j1,j2}^* h_t^2 s_\beta^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{\sqrt{2} m_t^2}$$

$$C(h^0, H^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{i m_{u_{j1}}^2 \text{CKM}_{j1,j2} h_t^2 s_{2\beta} U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{2 \sqrt{2} m_t^2}$$

$$C(h^0, G^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{i m_{u_{j1}}^2 \text{CKM}_{j1,j2} h_t^2 s_{\beta}^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{\sqrt{2} m_t^2}$$

$$C(A^0, H^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{2 \sqrt{2} c_{\beta}^4 m_{u_{j1}}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{\beta}^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{m_t^2 s_{2\beta}^2}$$

$$C(G^0, G^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{m_{u_{j1}}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{\beta}^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{\sqrt{2} m_t^2}$$

$$C(A^0, G^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{m_{u_{j1}}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{2\beta}^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{4 \sqrt{2} c_{\beta} m_t^2 s_{\beta}}$$

$$C(G^0, H^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{m_{u_{j1}}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{2\beta}^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{4 \sqrt{2} c_{\beta} m_t^2 s_{\beta}}$$

$$C(A^0, H^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{2 \sqrt{2} c_{\beta}^4 m_{u_{j1}}^2 \text{CKM}_{j1,j2} h_t^2 s_{\beta}^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{m_t^2 s_{2\beta}^2}$$

$$C(G^0, G^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{m_{u_{j1}}^2 \text{CKM}_{j1,j2} h_t^2 s_{\beta}^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{\sqrt{2} m_t^2}$$

$$C(A^0, G^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{m_{u_{j1}}^2 \text{CKM}_{j1,j2} h_t^2 s_{2\beta}^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{4 \sqrt{2} c_{\beta} m_t^2 s_{\beta}}$$

$$C(G^0, H^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = \frac{m_{u_{j1}}^2 \text{CKM}_{j1,j2} h_t^2 s_{2\beta}^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{4 \sqrt{2} c_{\beta} m_t^2 s_{\beta}}$$

$$C(H^0, H^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{2 \sqrt{2} i c_{\beta}^4 m_{u_{j1}}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{\beta}^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{m_t^2 s_{2\beta}^2}$$

$$C_{92}(H^0, G^-, \tilde{u}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{i m_{u_1}^2 \text{CKM}_{j1,j2}^* h_t^2 s_{2\beta} U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{d},j2}}{2 \sqrt{2} m_t^2}$$

$$C_{93}(H^0, H^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = -\frac{2 \sqrt{2} i c_\beta^4 m_{u_1}^2 \text{CKM}_{j1,j2} h_t^2 s_\beta^2 U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{m_t^2 s_{2\beta}^2}$$

$$C_{94}(H^0, G^+, \tilde{d}_{j2}^{s2}, \tilde{u}_{j1}^{s1,\dagger}) = -\frac{i m_{u_1}^2 \text{CKM}_{j1,j2} h_t^2 s_{2\beta} U_{s1,1}^{\tilde{u},j1} U_{s2,1}^{\tilde{d},j2*}}{2 \sqrt{2} m_t^2}$$

$$C_{107}(H^-, H^+, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{u_1}^2 h_t^2 s_{2\beta}^2 U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j2}}{4 m_t^2 s_\beta^2}$$

$$C_{108}(G^-, G^+, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{u_1}^2 h_t^2 s_\beta^2 U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j2}}{m_t^2}$$

$$C_{109}(H^-, G^+, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{u_1}^2 h_t^2 s_{2\beta} U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j2}}{2 m_t^2}$$

$$C_{110}(G^-, H^+, \tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}) = -\frac{i \delta_{j1,j2} m_{u_1}^2 h_t^2 s_{2\beta} U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j2}}{2 m_t^2}$$

$$C_{111}(H^-, H^+, \tilde{d}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{i h_t^2 s_{2\beta}^2 U_{s1,1}^{\tilde{d},j1*} U_{s2,1}^{\tilde{d},j2}}{4 m_t^2 s_\beta^2} \left(m_{u_1}^2 \text{CKM}_{1,j1} \text{CKM}_{1,j2}^* + m_{u_2}^2 \text{CKM}_{2,j1} \text{CKM}_{2,j2}^* + m_{u_3}^2 \text{CKM}_{3,j1} \text{CKM}_{3,j2}^* \right)$$

$$C_{112}(G^-, G^+, \tilde{d}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{i h_t^2 s_\beta^2 U_{s1,1}^{\tilde{d},j1*} U_{s2,1}^{\tilde{d},j2}}{m_t^2} \left(m_{u_1}^2 \text{CKM}_{1,j1} \text{CKM}_{1,j2}^* + m_{u_2}^2 \text{CKM}_{2,j1} \text{CKM}_{2,j2}^* + m_{u_3}^2 \text{CKM}_{3,j1} \text{CKM}_{3,j2}^* \right)$$

$$C_{113}(H^-, G^+, \tilde{d}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{i h_t^2 s_{2\beta} U_{s1,1}^{\tilde{d},j1*} U_{s2,1}^{\tilde{d},j2}}{2 m_t^2} \left(m_{u_1}^2 \text{CKM}_{1,j1} \text{CKM}_{1,j2}^* + m_{u_2}^2 \text{CKM}_{2,j1} \text{CKM}_{2,j2}^* + m_{u_3}^2 \text{CKM}_{3,j1} \text{CKM}_{3,j2}^* \right)$$

$$C_{114}(G^-, H^+, \tilde{d}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}) = -\frac{i h_t^2 s_{2\beta} U_{s1,1}^{\tilde{d},j1*} U_{s2,1}^{\tilde{d},j2}}{2 m_t^2} \left(m_{u_1}^2 \text{CKM}_{1,j1} \text{CKM}_{1,j2}^* + m_{u_2}^2 \text{CKM}_{2,j1} \text{CKM}_{2,j2}^* + m_{u_3}^2 \text{CKM}_{3,j1} \text{CKM}_{3,j2}^* \right)$$

[SSSS] 4 Sleptons

$$C_{119}(\tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2,\dagger}, \tilde{e}_{j3}^{s3}, \tilde{e}_{j4}^{s4,\dagger}) = -\frac{i}{c_\beta^2 c_W^2 s_W^2} \left\{ \begin{aligned} &\delta_{j1,j4} \delta_{j2,j3} \left(\frac{c_W^2 m_{e1} m_{e2} h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j2} U_{s3,1}^{\tilde{e},j2*} U_{s4,1}^{\tilde{e},j1}}{m_t^2} + \frac{c_W^2 m_{e1} m_{e2} h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j2} U_{s3,2}^{\tilde{e},j2*} U_{s4,2}^{\tilde{e},j1}}{m_t^2} \right) + \\ &\delta_{j1,j2} \delta_{j3,j4} \left(\frac{c_W^2 m_{e1} m_{e3} h_t^2 s_\beta^2 s_W^2 U_{s1,1}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j1} U_{s3,2}^{\tilde{e},j3*} U_{s4,1}^{\tilde{e},j3}}{m_t^2} + \frac{c_W^2 m_{e1} m_{e3} h_t^2 s_\beta^2 s_W^2 U_{s1,2}^{\tilde{e},j1*} U_{s2,1}^{\tilde{e},j1} U_{s3,1}^{\tilde{e},j3*} U_{s4,2}^{\tilde{e},j3}}{m_t^2} \right) \end{aligned} \right\}$$

$$C_{120}(\tilde{e}_{j1}^{s1}, \tilde{e}_{j2}^{s2,\dagger}, \tilde{\nu}_{j3}, \tilde{\nu}_{j4}^\dagger) = -\frac{i \delta_{j1,j4} \delta_{j2,j3} m_{e1} m_{e2} h_t^2 s_\beta^2 U_{s1,2}^{\tilde{e},j1*} U_{s2,2}^{\tilde{e},j2}}{c_\beta^2 m_t^2}$$

[SSSS] 4 Squarks

$$C_{116}(\tilde{d}_{j1}^{s1}, \tilde{d}_{j2}^{s2,\dagger}, \tilde{u}_{j3}^{s3}, \tilde{u}_{j4}^{s4,\dagger}) = -\frac{i m_{u3} m_{u4} \text{CKM}_{j3,j2}^* \text{CKM}_{j4,j1} h_t^2 U_{s1,1}^{\tilde{d},j1*} U_{s2,1}^{\tilde{d},j2} U_{s3,2}^{\tilde{u},j3*} U_{s4,2}^{\tilde{u},j4}}{m_t^2}$$

$$C_{121}(\tilde{u}_{j1}^{s1}, \tilde{u}_{j2}^{s2,\dagger}, \tilde{u}_{j3}^{s3}, \tilde{u}_{j4}^{s4,\dagger}) = -\frac{i}{9 c_W^2 s_W^2} \left\{ \begin{aligned} &\delta_{j1,j4} \delta_{j2,j3} \left(\frac{9 c_W^2 m_{u1} m_{u2} h_t^2 s_W^2 U_{s1,2}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j2} U_{s3,1}^{\tilde{u},j2*} U_{s4,1}^{\tilde{u},j1}}{m_t^2} + \frac{9 c_W^2 m_{u1} m_{u2} h_t^2 s_W^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j2} U_{s3,2}^{\tilde{u},j2*} U_{s4,2}^{\tilde{u},j1}}{m_t^2} \right) + \\ &\delta_{j1,j2} \delta_{j3,j4} \left(\frac{9 c_W^2 m_{u1} m_{u3} h_t^2 s_W^2 U_{s1,1}^{\tilde{u},j1*} U_{s2,2}^{\tilde{u},j1} U_{s3,2}^{\tilde{u},j3*} U_{s4,1}^{\tilde{u},j3}}{m_t^2} + \frac{9 c_W^2 m_{u1} m_{u3} h_t^2 s_W^2 U_{s1,2}^{\tilde{u},j1*} U_{s2,1}^{\tilde{u},j1} U_{s3,1}^{\tilde{u},j3*} U_{s4,2}^{\tilde{u},j3}}{m_t^2} \right) \end{aligned} \right\}$$