

Decomposition from Grozin/Neubert:

$$\begin{aligned} \langle 0 | \bar{q}(0) \Gamma_1 G_{\mu\nu}(0) b_v(0) | B \rangle &= \frac{-i}{6} F(\mu) \{ \lambda_H^2(\mu) \cdot \text{Tr}[\Gamma_1 P_+ \gamma_5 \sigma_{\mu\nu}] \\ &\quad + [\lambda_H^2(\mu) - \lambda_E^2(\mu)] \cdot \text{Tr}[\Gamma_1 P_+ \gamma_5 (iv_\mu \gamma_\nu - iv_\nu \gamma_\mu)] \} \end{aligned} \quad (1)$$

What about:

$$\sigma_{\mu\alpha} v^\alpha v_\nu \quad (2)$$

$$\begin{aligned} &\langle 0 | \bar{q}(0) \Gamma_1 g_s G_{\mu\nu}(0) b_v(0) | B \rangle \langle B | \bar{b}_v(x) \Gamma_2 g_s G_{\rho\sigma}(x) q(x) | 0 \rangle \\ &= \frac{-i}{6} F(\mu) \left[\lambda_H^2(\mu) \cdot \text{Tr}[\Gamma_1 P_+ \gamma_5 \sigma_{\mu\nu}] + [\lambda_H^2(\mu) - \lambda_E^2(\mu)] \cdot \text{Tr}[\Gamma_1 P_+ \gamma_5 (iv_\mu \gamma_\nu - iv_\nu \gamma_\mu)] \right] \cdot \\ &\quad \frac{-i}{6} F^\dagger(\mu) \left[\lambda_H^2 \text{Tr}[\gamma_5 P_+ \Gamma_2 \sigma_{\rho\sigma}] - (\lambda_H^2 - \lambda_E^2) \cdot \text{Tr}[\gamma_5 P_+ \Gamma_2 (iv_\rho \gamma_\sigma - iv_\sigma \gamma_\rho)] \right] \\ &= F(\mu)^2 \left[-\frac{1}{36} \lambda_H^4 \text{Tr}\{\sigma_{\mu\nu} \Gamma_1 P_+ \Gamma_2 \sigma_{\rho\sigma}\} + \frac{1}{36} \lambda_H^2 (\lambda_H^2 - \lambda_E^2) \text{Tr}\{\sigma_{\mu\nu} \Gamma_1 P_+ \Gamma_2 (iv_\rho \gamma_\sigma - iv_\sigma \gamma_\rho)\} - \right. \\ &\quad \frac{1}{36} \lambda_H^2 (\lambda_H^2 - \lambda_E^2) \text{Tr}\{(iv_\mu \gamma_\nu - iv_\nu \gamma_\mu) \Gamma_1 P_+ \Gamma_2 \sigma_{\rho\sigma}\} + \\ &\quad \left. \frac{1}{36} (\lambda_H^2 - \lambda_E^2)^2 \text{Tr}\{(iv_\mu \gamma_\nu - iv_\nu \gamma_\mu) \Gamma_1 P_+ \Gamma_2 (iv_\rho \gamma_\sigma - iv_\sigma \gamma_\rho)\} \right] \end{aligned} \quad (3)$$

Perform mapping:

$$\begin{aligned} \text{Tr}\{\Gamma_1 P_+ \Gamma_2 \sigma_{\rho\sigma} \sigma_{\mu\nu}\} &= \text{Tr}[\Gamma_1 P_+ \Gamma_2] \cdot \left[A \cdot (g_{\mu\rho} g_{\nu\sigma} - g_{\mu\sigma} g_{\nu\rho}) + B \cdot (-g_{\nu\rho} v_\mu v_\rho + g_{\mu\sigma} v_\nu v_\rho + g_{\nu\rho} v_\mu v_\sigma - \right. \\ &\quad \left. g_{\mu\rho} v_\nu v_\sigma) \right] \end{aligned} \quad (4)$$

$$\begin{aligned} \text{Tr}\{\Gamma_1 P_+ \Gamma_2 (iv_\rho \gamma_\sigma - iv_\sigma \gamma_\rho) (iv_\mu \gamma_\nu - iv_\nu \gamma_\mu)\} &= \text{Tr}[\Gamma_1 P_+ \Gamma_2] \cdot \left[A \cdot (g_{\mu\rho} g_{\nu\sigma} - g_{\mu\sigma} g_{\nu\rho}) + B \cdot (-g_{\nu\rho} v_\mu v_\rho + \right. \\ &\quad \left. g_{\mu\sigma} v_\nu v_\rho + g_{\nu\rho} v_\mu v_\sigma - g_{\mu\rho} v_\nu v_\sigma) \right] \end{aligned} \quad (5)$$

$$\begin{aligned} \text{Tr}\{\Gamma_1 P_+ \Gamma_2 (iv_\rho \gamma_\sigma - iv_\sigma \gamma_\rho) \sigma_{\mu\nu}\} + \text{Tr}\{\Gamma_1 P_+ \Gamma_2 (iv_\mu \gamma_\nu - iv_\nu \gamma_\mu) \sigma_{\rho\sigma}\} &= \left[A \cdot (g_{\mu\rho} g_{\nu\sigma} - g_{\mu\sigma} g_{\nu\rho}) + \right. \\ &\quad \left. B \cdot (-g_{\nu\rho} v_\mu v_\rho + g_{\mu\sigma} v_\nu v_\rho + g_{\nu\rho} v_\mu v_\sigma - g_{\mu\rho} v_\nu v_\sigma) \right] \end{aligned} \quad (6)$$