$$F_{UU} \sim \sum_a e_a^2 \, f_1^a \otimes D_1^a$$

$$F_{LT}^{\cos(\phi-\phi_S)} \sim \sum_a e_a^2 \, g_{1T}^{\perp a} \otimes D_1^a$$

$$F_{LL} \sim \sum_a e_a^2 \, g_{1L}^a \otimes D_1^a$$

$$F_{UT}^{\sin(\phi-\phi_S)} \sim \sum_a e_a^2 \, f_{1T}^{\perp a} \otimes D_1^a$$