

$$\psi = \frac{a}{2b} \exp[b(I_1 - 3)] + \sum_{\iota=f,s} \frac{a_{\iota}}{2b_{\iota}} \{ \exp[b_{\iota}(I_{4\iota} - 1)^2] - 1 \} + \frac{a_{fs}}{2b_{fs}} [\exp(b_{fs}I_{8fs}^2) - 1]$$