X=T, n=2 : Operators and Kinematic Factors

E.T.

December 12, 2024

(1, 1)

$$O_1^{T(1,1),1} = O_{1,1} + O_{2,2} + O_{3,3} + O_{4,4}$$
$$K_1^{T(1,1),1} = 0$$

(3, 1)

$$O_1^{T(3,1),1} = O_{1,1} + O_{2,2} + O_{3,3} - 3O_{4,4}$$
$$K_1^{T(3,1),1} = 0$$

$$O_2^{T(3,1),1} = O_{1,1} + O_{2,2} - 2O_{3,3}$$
$$K_2^{T(3,1),1} = 0$$

$$O_3^{T(3,1),1} = O_{1,1} - O_{2,2}$$
$$K_3^{T(3,1),1} = 0$$

(6, 1)

$$O_1^{T(6,1),1} = O_{1,2} - O_{2,1}$$
$$K_1^{T(6,1),1} = \frac{2i(E(p)^2 + 2E(p)m_N + m_N^2 + p_1^2 + p_2^2 - p_3^2)}{(E(p)(E(p) + m_N))}$$

$$O_2^{T(6,1),1} = O_{1,3} - O_{3,1}$$
$$K_2^{T(6,1),1} = \frac{4ip_2p_3}{(E(p)(E(p) + m_N))}$$

$$O_3^{T(6,1),1} = O_{2,3} - O_{3,2}$$
$$K_3^{T(6,1),1} = \frac{-4ip_1p_3}{(E(p)(E(p) + m_N))}$$

$$O_4^{T(6,1),1} = O_{1,4} - O_{4,1}$$
$$K_4^{T(6,1),1} = \frac{-4p_2}{E(p)}$$

$$O_5^{T(6,1),1} = O_{2,4} - O_{4,2}$$
$$K_5^{T(6,1),1} = \frac{4p_1}{E(p)}$$

$$O_6^{T(6,1),1} = O_{3,4} - O_{4,3}$$
$$K_6^{T(6,1),1} = 0$$

(6, 3)

$$O_1^{T(6,3),1} = O_{1,2} + O_{2,1}$$
$$K_1^{T(6,3),1} = 0$$

$$O_2^{T(6,3),1} = O_{1,3} + O_{3,1}$$
$$K_2^{T(6,3),1} = 0$$

$$O_3^{T(6,3),1} = O_{2,3} + O_{3,2}$$
$$K_3^{T(6,3),1} = 0$$

$$O_4^{T(6,3),1} = O_{1,4} + O_{4,1}$$
$$K_4^{T(6,3),1} = 0$$

$$O_5^{T(6,3),1} = O_{2,4} + O_{4,2}$$
$$K_5^{T(6,3),1} = 0$$

$$O_6^{T(6,3),1} = O_{3,4} + O_{4,3}$$
$$K_6^{T(6,3),1} = 0$$