

$$\Gamma_{1234}^{(4)} = \delta_{13}\delta_{24} \left(\text{Diagram 1} + \text{Diagram 2} \right) + \delta_{13}\delta_{24} \left(\text{Diagram 3} + \text{Diagram 4} \right) + \text{Diagram 5} + \text{Diagram 6} + \dots$$

The image displays a series of Feynman diagrams representing the four-point function $\Gamma_{1234}^{(4)}$. The diagrams are organized into two rows, separated by a plus sign. The first row shows two diagrams enclosed in large parentheses, each preceded by a factor of $\delta_{13}\delta_{24}$. The second row shows two more diagrams in parentheses, also preceded by $\delta_{13}\delta_{24}$, followed by two additional diagrams and an ellipsis.

Diagram 1 (Top Left): A tree-level diagram with two external lines on the left (labeled 1 and 2) and two on the right (labeled 3 and 4). A wavy line connects the two vertices on the left. The external lines on the right are crossed, indicating a permutation of the final state.

Diagram 2 (Top Right): A tree-level diagram similar to Diagram 1, but with the external lines on the left crossed.

Diagram 3 (Bottom Left): A tree-level diagram with two external lines on the left (labeled 1 and 2) and two on the right (labeled 3 and 4). A wavy line connects the two vertices on the left. A loop is formed by two internal lines (labeled 5 and 6) connecting the two vertices on the left.

Diagram 4 (Bottom Middle-Left): A tree-level diagram similar to Diagram 3, but with the external lines on the left crossed.

Diagram 5 (Bottom Middle-Right): A one-loop diagram with two external lines on the left (labeled 1 and 2) and two on the right (labeled 3 and 4). The loop is formed by two internal lines (labeled 3 and 4) connecting the two vertices on the left.

Diagram 6 (Bottom Right): A one-loop diagram similar to Diagram 5, but with the external lines on the left crossed.

The ellipsis indicates that there are more diagrams in the series.