

Diagram illustrating a particle interaction process, likely a scattering or annihilation/creation process, involving two vertices (represented by black dots) and two external pairs of particles.

The diagram is composed of three main parts:

- Left Diagram:** Shows two vertices connected by a vertical line. The left side has two incoming lines labeled $-\mathbf{k}'_1$ (top, dashed) and \mathbf{k}'_1 (bottom, solid). The right side has two outgoing lines labeled $-\mathbf{k}_1$ (top, dashed) and \mathbf{k}_1 (bottom, solid).
- Middle Diagram:** Shows two vertices connected by a vertical line. The left side has two incoming lines labeled $-\mathbf{k}'_1$ (top, dashed) and \mathbf{k}'_1 (bottom, solid). The right side has two outgoing lines labeled $-\mathbf{k}_2$ (top, dashed) and \mathbf{k}_2 (bottom, solid).
- Right Diagram:** Shows two vertices connected by a vertical line. The left side has two incoming lines labeled $-\mathbf{k}'_1$ (top, dashed) and \mathbf{k}'_1 (bottom, solid). The right side has two outgoing lines labeled $-\mathbf{k}_1$ (top, dashed) and \mathbf{k}_1 (bottom, solid).

The diagrams are connected by a minus sign ($-$) between the left and middle diagrams, and a plus sign ($+$) between the middle and right diagrams. The right diagram is followed by a plus sign and a double-headed arrow between \mathbf{k}_1 and \mathbf{k}_2 , indicating a summation or exchange of the final state momenta.

$$\begin{array}{c}
 \text{---} \mathbf{k}_2 \\
 \text{---} -\mathbf{k}_2 \\
 \\
 -\mathbf{k}'_1 \quad \text{---} \bullet \quad \text{---} -\mathbf{k}_1 \\
 \mathbf{k}'_1 \quad \text{---} \bullet \quad \text{---} \mathbf{k}_1
 \end{array}
 -
 \begin{array}{c}
 \text{---} \mathbf{k}_2 \\
 \text{---} -\mathbf{k}_2 \\
 \\
 -\mathbf{k}'_1 \quad \text{---} \bullet \quad \text{---} -\mathbf{k}_1 \\
 \mathbf{k}'_1 \quad \text{---} \bullet \quad \text{---} \mathbf{k}_1
 \end{array}
 +
 \left(\mathbf{k}_1 \longleftrightarrow \mathbf{k}_2 \right)$$