

The diagram illustrates the decomposition of a Z boson exchange process into two parts, separated by an equals sign and a plus sign.

Left side (Initial process): A horizontal wavy line represents a Z boson. It connects two vertices. The left vertex is a shaded circle with diagonal lines, representing a fermion loop. The right vertex is a solid black dot. Four fermion lines (solid lines with arrows) enter and exit these vertices: two from the left vertex and two from the right vertex.

Middle: An equals sign ($=$) followed by a plus sign ($+$).

Right side (Decomposition):

- The first term is a diagram where the shaded fermion loop is replaced by a direct connection between the two vertices, resulting in a single vertex (solid black dot) where all four fermion lines meet.
- The second term is a contact term represented by a solid black dot where all four fermion lines meet. To the right of this dot is the label $\leftarrow \hat{W}/m_Z^2$.