

The diagram illustrates the decomposition of a W boson exchange process into a neutrino exchange process and a neutrino loop correction process.

On the left, a W boson (represented by a double wavy line) connects two vertices. The incoming particles are c and d (represented by dotted lines with arrows), and the outgoing particles are a and b (represented by dotted lines with arrows). The W boson is labeled $i\nu$.

This is equal to the sum of two terms:

1. A neutrino exchange process (represented by a single wavy line) connecting the same vertices. The neutrino is labeled ν .

2. A neutrino loop correction process (represented by a wavy line with a loop). The incoming particles are c and d , and the outgoing particles are a and b . The loop is labeled $W P \nu$. The vertices are labeled $l\sigma_3$ and $j\sigma_4$. The loop momentum is labeled $k\sigma_4$. The external momenta are labeled $i\omega - i\nu$ and $i\omega$.