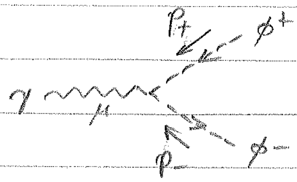
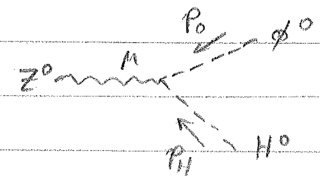
Feynman rules for scalar QED-like terms $\sim A_\mu \phi^+ \overleftrightarrow{\partial^\mu} \phi^-$

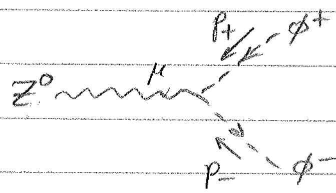


$= -ie\,(p_+ - p_-)^\mu$

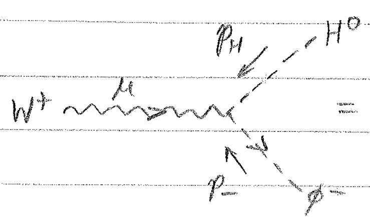


$= \frac{-1}{2}\, g_Z\, (p_H - p_0)^\mu$

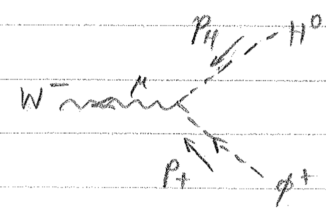
$g_Z^2 = g^2 + g'^2$



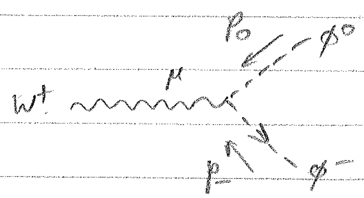
$= \frac{-i}{2} \cos 2\theta_W\, g_Z (p_+ - p_-)^\mu$



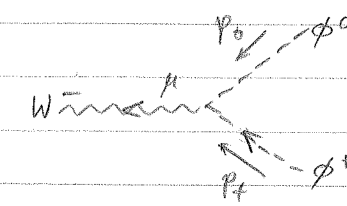
$= \frac{-i}{2} g (p_H - p_-)^\mu$



$= \frac{i}{2} g\, (p_H - p_+)^\mu$



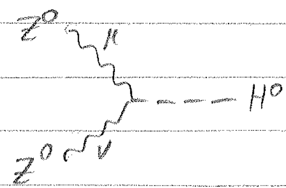
$= \frac{-1}{2} g (p_- - p_0)^\mu$



$= \frac{-1}{2} g\, (p_+ - p_0)^\mu$

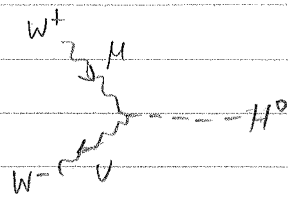
all combinatoric factors $= 1$

VEV-dep. 3 point interactions

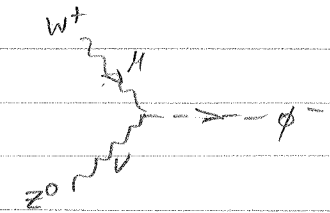


$= \frac{i}{2} g_Z^2 v g^{\mu\nu}$

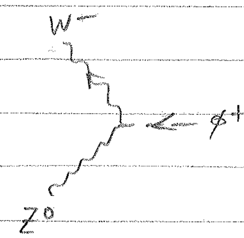
comb. factor $= \frac{1}{2}$



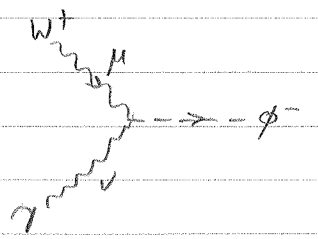
$= \frac{i}{2} g^2 v g^{\mu\nu}$



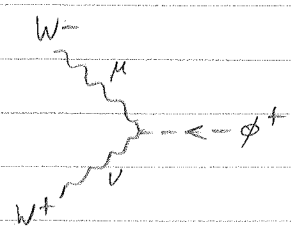
$= \frac{-i}{2} s_W^2 g g_Z v g^{\mu\nu}$



$= \frac{-i}{2} s_W^2 g g_Z v g^{\mu\nu}$

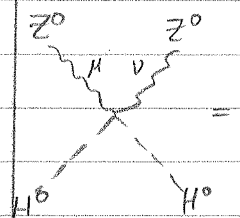


$= \frac{i}{2} e g v g^{\mu\nu}$



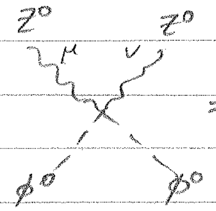
$= \frac{i}{2} e g v g^{\mu\nu}$

4-point interactions



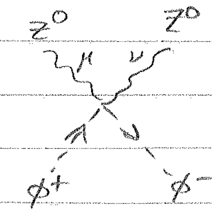
$= \frac{i}{2} g_Z^2 g^{\mu\nu}$

comb. factor $= \frac{1}{4}$



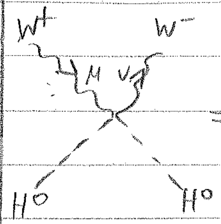
$= \frac{i}{2} g_Z^2 g^{\mu\nu}$

comb factor $= \frac{1}{4}$



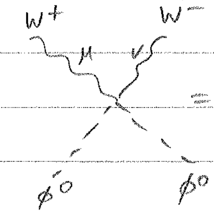
$= \frac{ig^2}{2} \cos^2 2\theta_W g^{\mu\nu}$

comb factor =



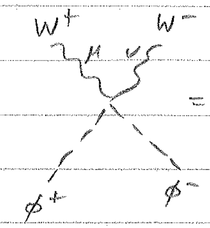
$= \frac{i}{2} g^2 g^{\mu\nu}$

comb factor $= \frac{1}{2}$



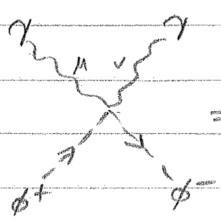
$= \frac{i}{2} g^2 g^{\mu\nu}$

comb factor $= \frac{1}{2}$



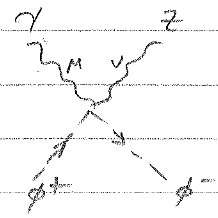
$= \frac{i}{2} g\, g^{\mu\nu}$

comb factor $= 1$



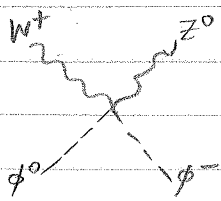
$= 2ie^2 g^{\mu\nu}$

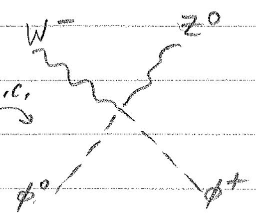
comb factor $= \frac{1}{2}$



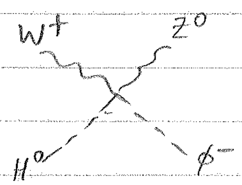
$= ie \cos 2\theta_W\, g_Z\, g^{\mu\nu}$

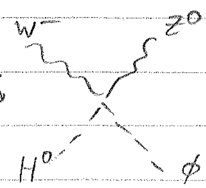
comb factor $= 1$



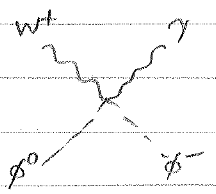
$= \frac{1}{2} s_W^2 g g_Z g^{\mu\nu}$ c.c. 

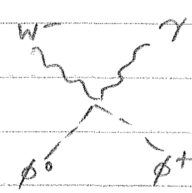
$= -\frac{1}{2} s_W^2 g g_Z g^{\mu\nu}$



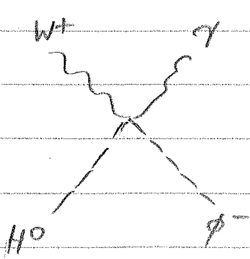
$= -\frac{i}{2} s_W^2 g g_Z g^{\mu\nu}$ c.c. 

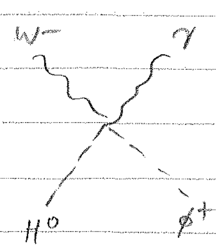
$= -\frac{i}{2} s_W^2 g g_Z g^{\mu\nu}$



$= -\frac{1}{2} e g g^{\mu\nu}$ c.c. 

$= \frac{1}{2} e g g^{\mu\nu}$



$= \frac{i}{2} e g g^{\mu\nu}$ c.c. 

$= \frac{i}{2} e g g^{\mu\nu}$