

diagram 1 QCD=0, QED=4

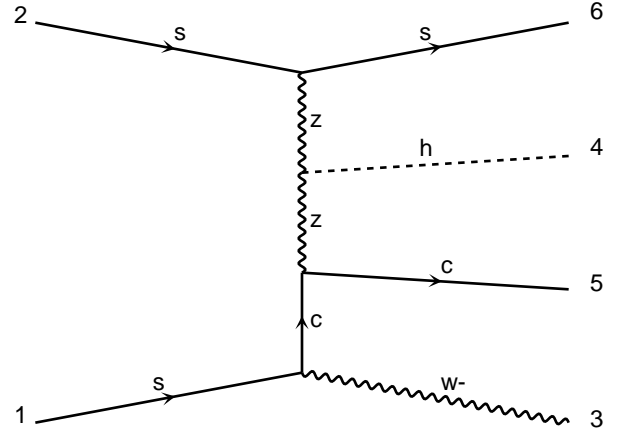


diagram 2 QCD=0, QED=4

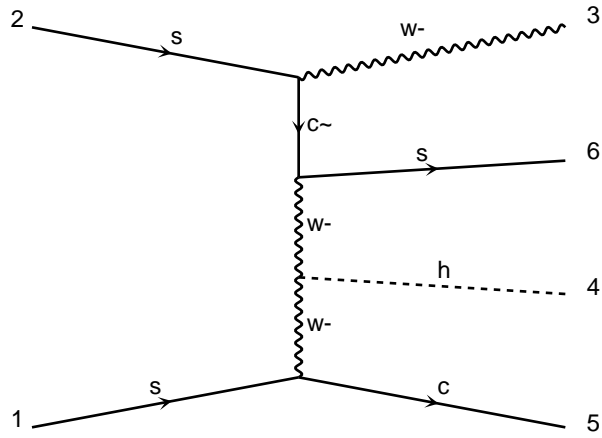


diagram 3 QCD=0, QED=4

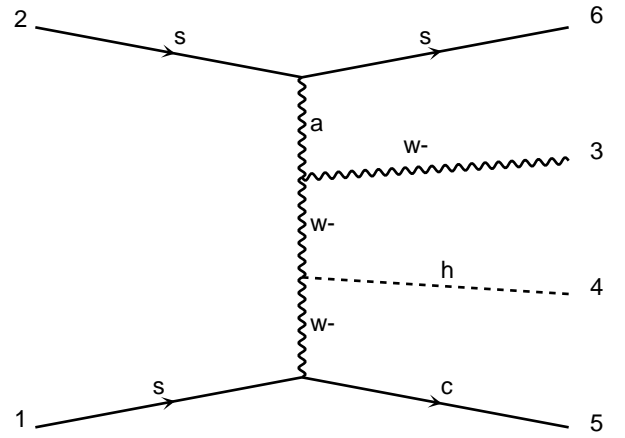


diagram 4 QCD=0, QED=4

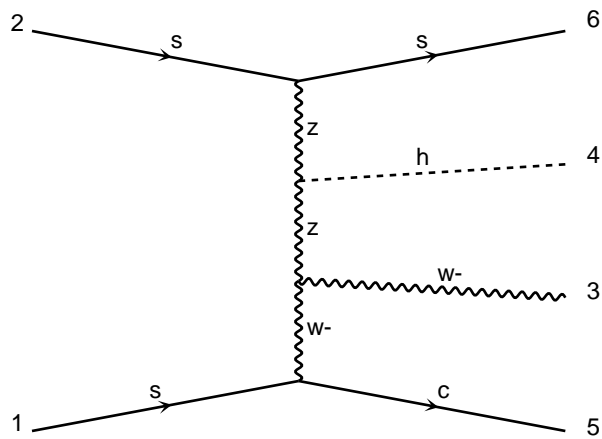


diagram 5 QCD=0, QED=4

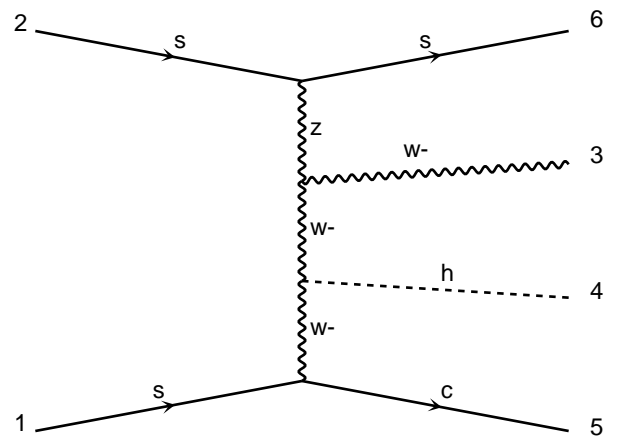


diagram 6 QCD=0, QED=4

The diagram shows a top quark (t) decaying into a charm quark (c) and a  $W^+$  boson. The  $W^+$  boson then decays into a photon ( $\gamma$ ) and an electron neutrino ( $\nu_e$ ). The particles are labeled with numbers 1 through 6 and letters: 't' for top quark, 'c' for charm quark, 'W+' for the W boson, 'gamma' for the photon, and 'nu\_e' for the electron neutrino. The incoming top quark is labeled 1 and 2. The outgoing charm quark is labeled 5. The outgoing photon is labeled 6. The outgoing electron neutrino is labeled 4. The W boson is labeled 3. The diagram is a tree-level Feynman diagram.

[illegible]

The diagram shows a charm quark (c) decaying into a charm quark (c) and a gluon (g). The incoming charm quark is labeled 'c' and the outgoing charm quark is labeled 'c'. The gluon is labeled 'g'. The exchange particle is a Z boson, labeled 'Z'. The diagram is a tree-level process.

The diagram shows a top quark (t) decaying into a charm quark (c), a gluon (g), and a bottom quark (b). The top quark line enters from the left (line 1) and splits into a charm quark (line 5) and a bottom quark (line 6). A W+ boson (line 2) is emitted from the top quark line and decays into a charm quark (line 4) and a gluon (line 3). A top quark loop (line 2) connects the charm quark and the gluon lines.

The diagram shows a top quark (t) decaying into a charm quark (c) and a W+ boson. The W+ boson then decays into a neutrino (ν) and a Z boson. The Z boson finally decays into a strange quark (s) and an anti-strange quark (s-bar). The particles are labeled with their respective symbols and indices: 1 (s), 2 (t), 3 (s-bar), 4 (ν), 5 (c), 6 (s).

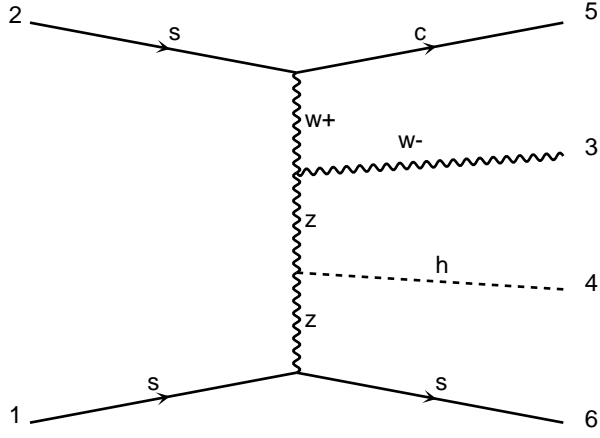


diagram 13 QCD=0, QED=4

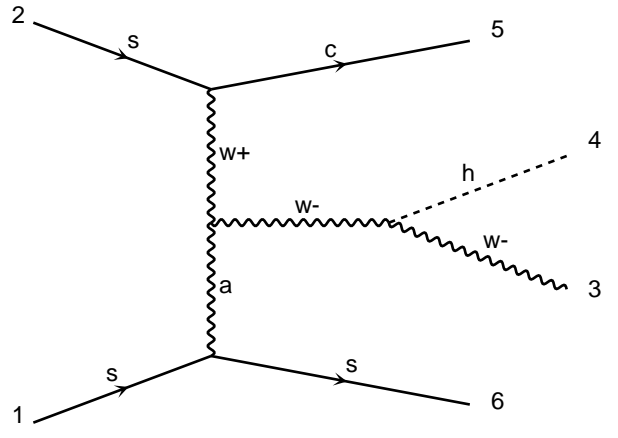


diagram 14 QCD=0, QED=4

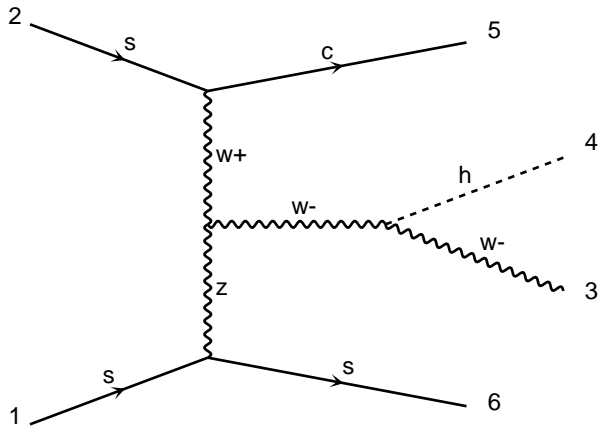


diagram 15 QCD=0, QED=4

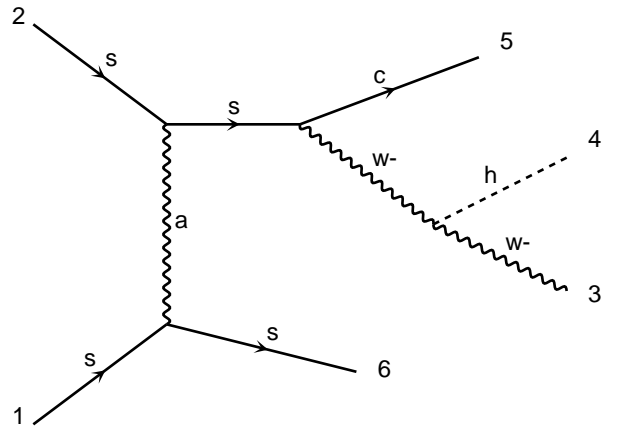


diagram 16 QCD=0, QED=4

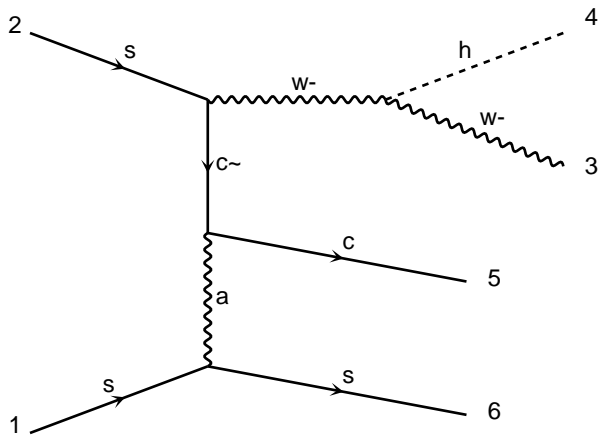


diagram 17 QCD=0, QED=4

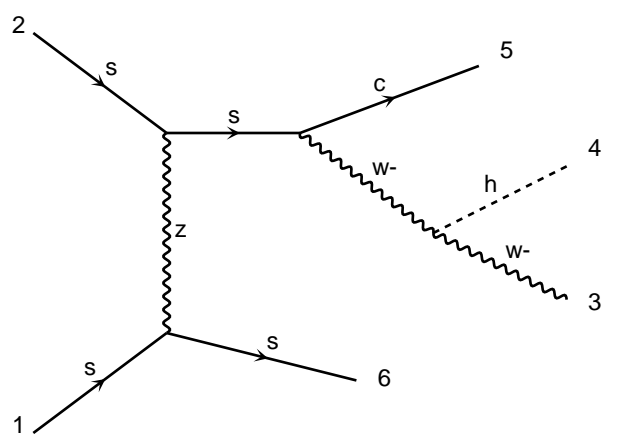


diagram 18 QCD=0, QED=4

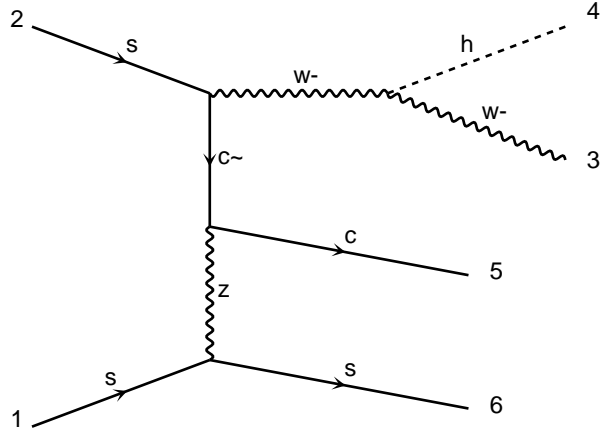


diagram 19 QCD=0, QED=4

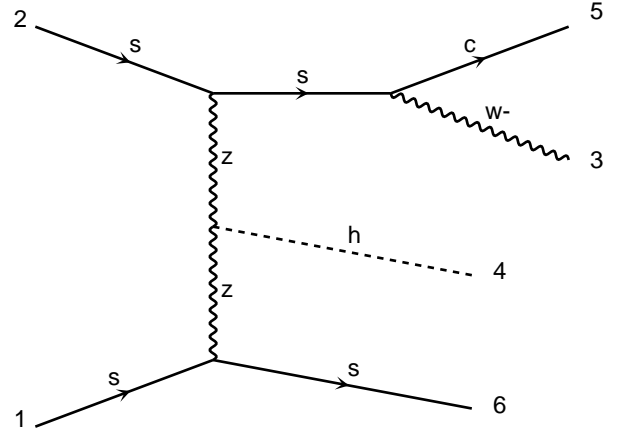


diagram 20 QCD=0, QED=4

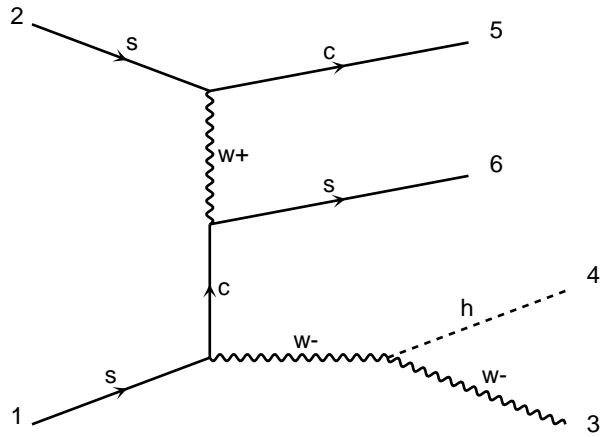


diagram 21 QCD=0, QED=4

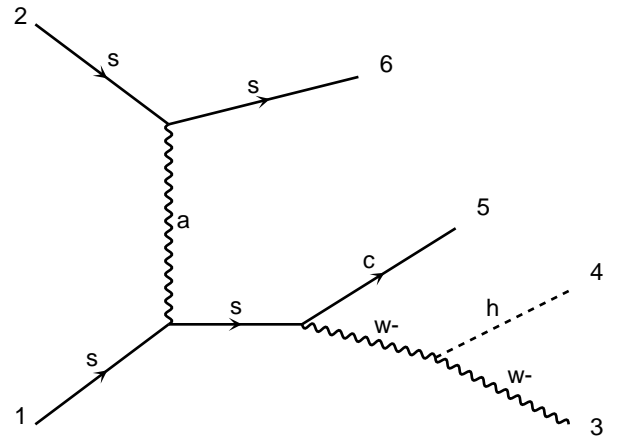


diagram 22 QCD=0, QED=4

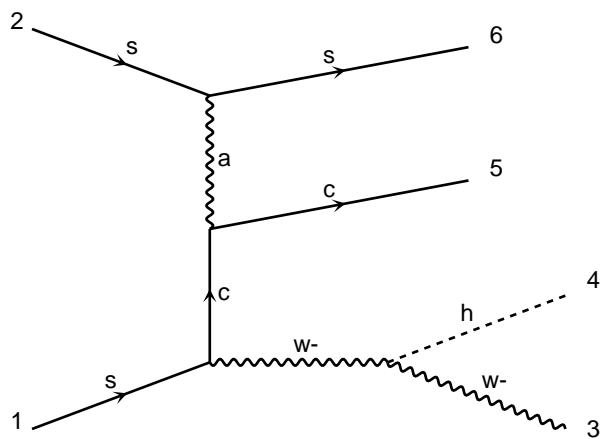


diagram 23 QCD=0, QED=4

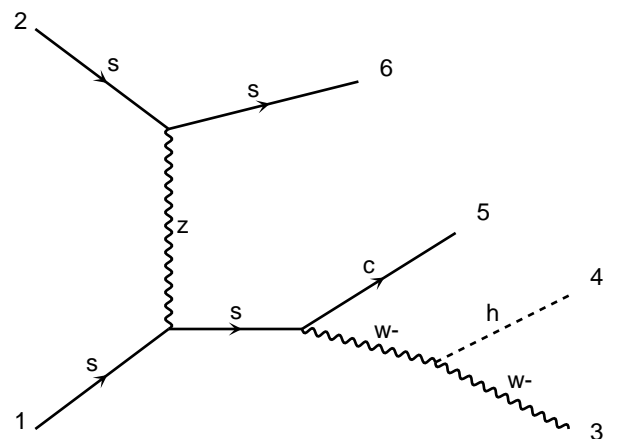


diagram 24 QCD=0, QED=4

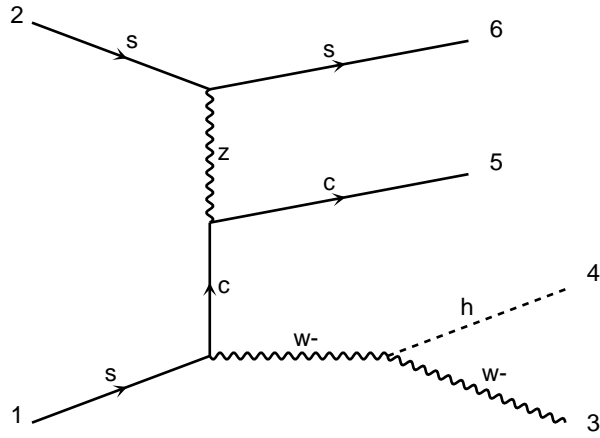


diagram 25

QCD=0, QED=4

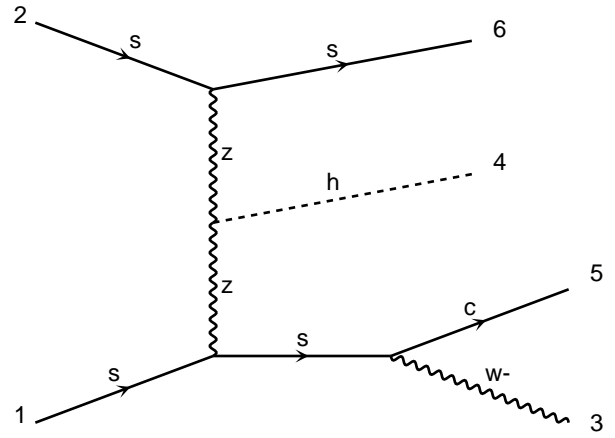


diagram 26

QCD=0, QED=4