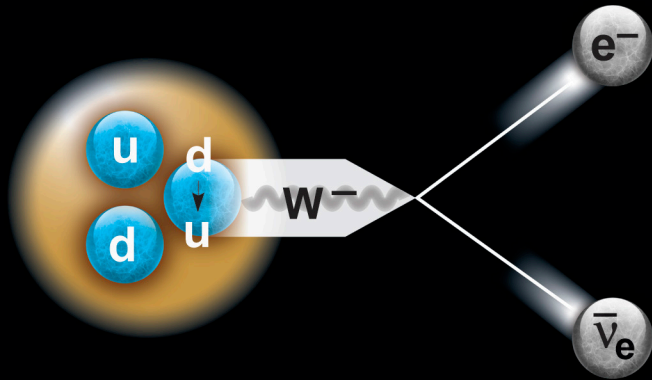


Particle Processes

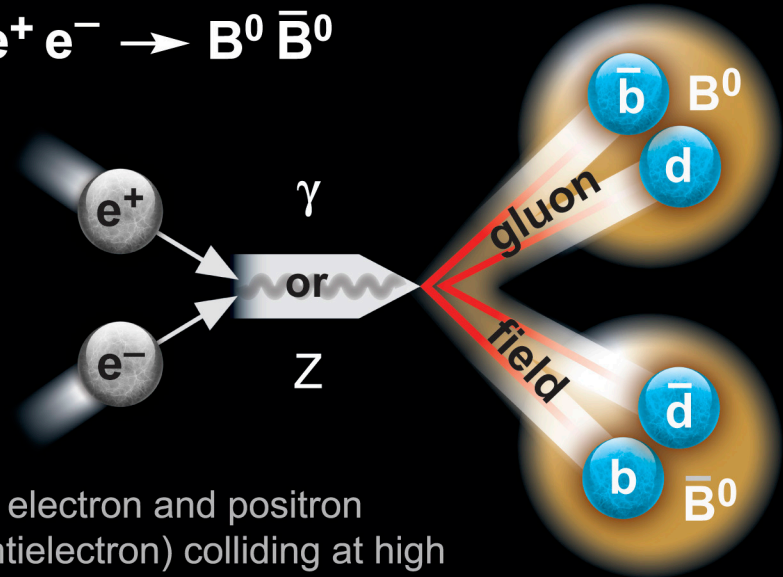
These diagrams are an artist's conception. Orange shaded areas represent the cloud of gluons.

$$n \rightarrow p e^- \bar{\nu}_e$$



A free neutron (udd) decays to a proton (uud), an electron, and an antineutrino via a virtual (mediating) W boson. This is neutron β (beta) decay.

$$e^+ e^- \rightarrow B^0 \bar{B}^0$$



An electron and positron (antielectron) colliding at high energy can annihilate to produce \bar{B}^0 and B^0 mesons via a virtual Z boson or a virtual photon.