

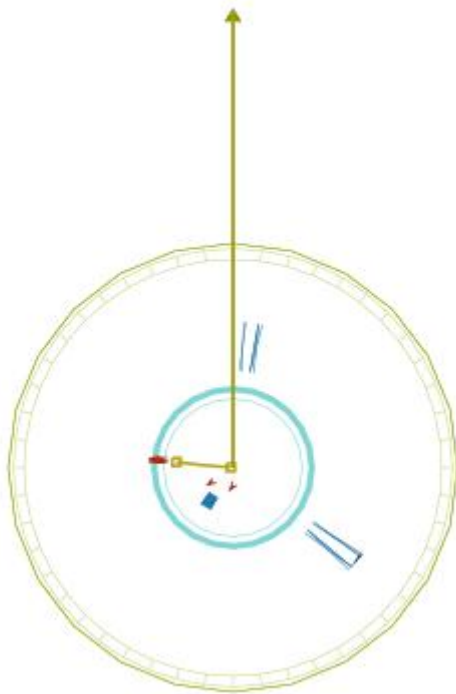


CMS W/Z Masterclass “Cheat Sheet”

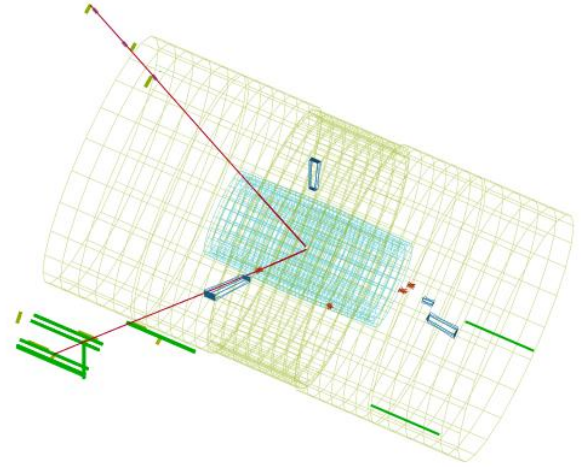


W and Z boson candidates

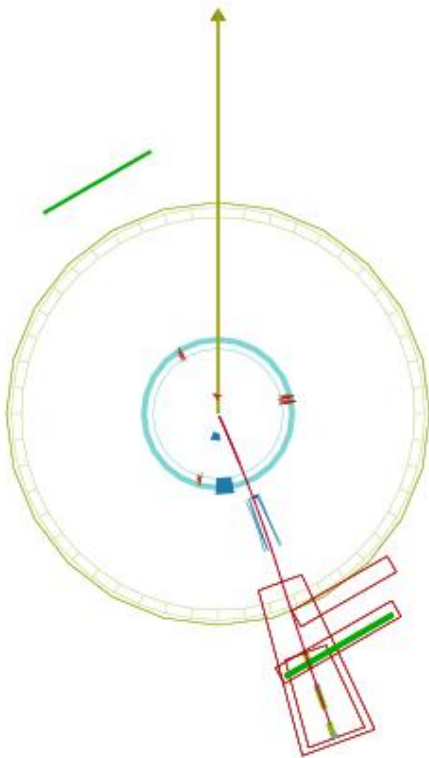
W decay to electron and neutrino:



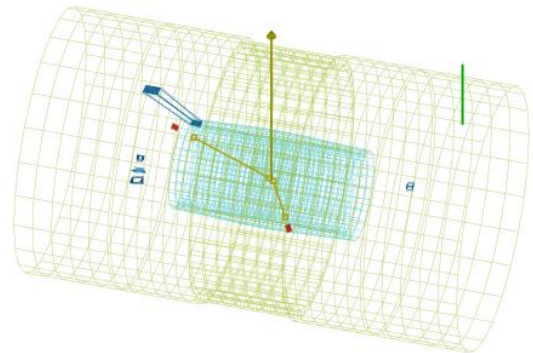
Z decay to muon and anti-muon:



W decay to muon and neutrino:



Z decay to electron and positron:



Notes on decays:

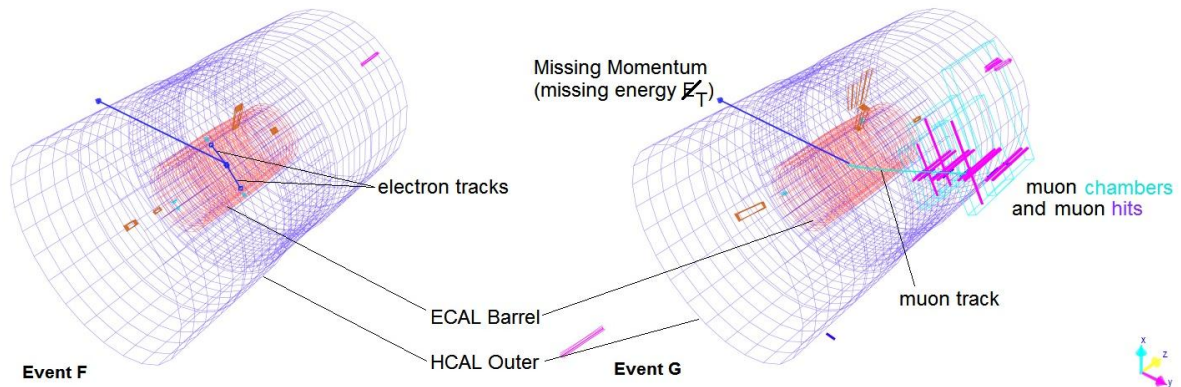
- *W decays have missing E_t (usually >20 GeV) and one visible lepton track.*
- *Z decays can show some missing E_t (usually <20 GeV) or none and have 2 visible lepton tracks.*
- *Both W and Z decays can have “extra” tracks which confound quick analysis – but a “good guess” can sometimes be made.*



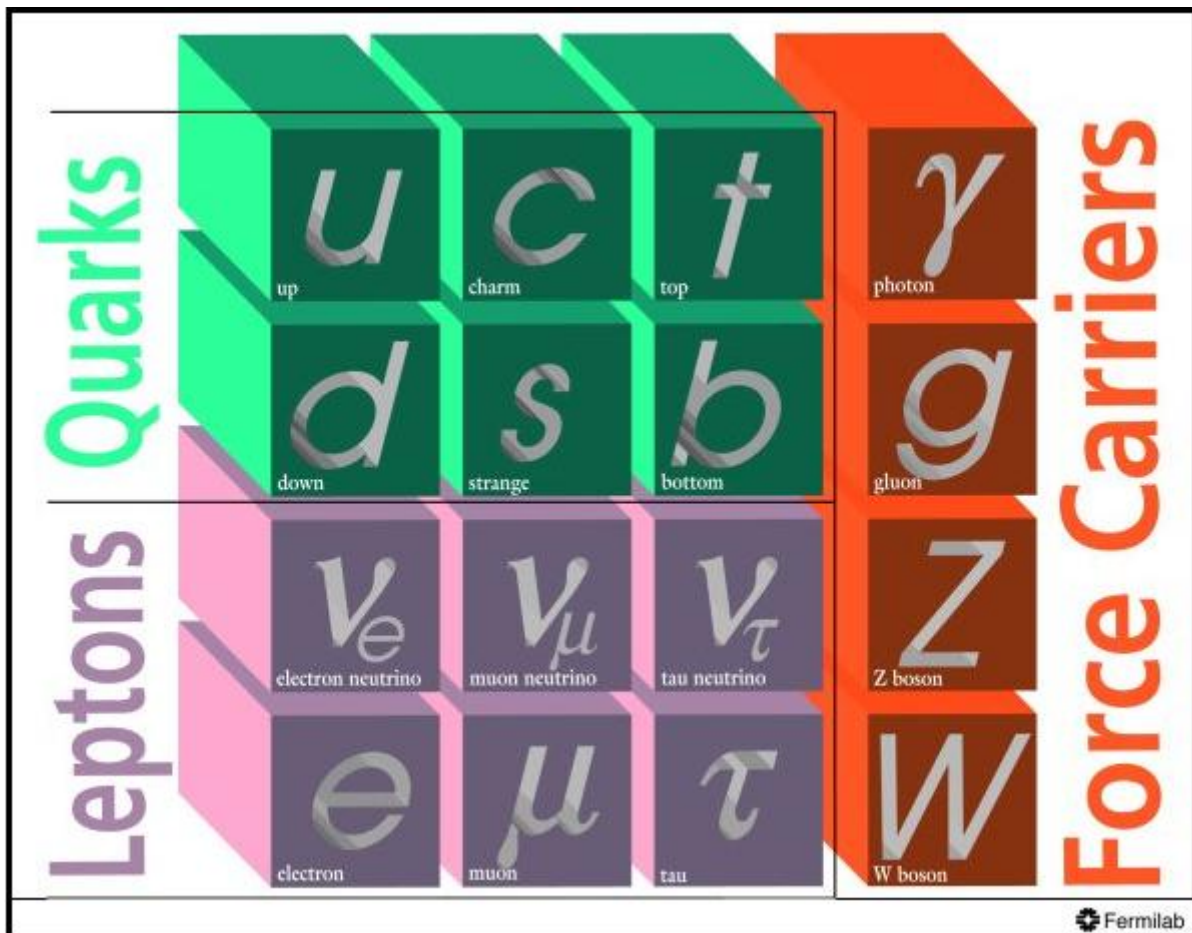
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Useful background on W/Z Masterclass events



Elements of W/Z events from iSpy-online



Particles in the standard model