

Sketch the tracks in CMS.

$(Z^0) \rightarrow \mu^+ \mu^-$

HCAL Outer - just outside solenoid magnet

+ particles curve clockwise

- particles curve anti-clockwise

ECAL Barrel

End (x-y) view

1. Draw a muon (-) going through the detector slice.
2. Draw an antimuon (+) going in the opposite direction.

$(Z^0) \rightarrow e^+ e^-$

ECAL energy deposit

electron track

End (x-y) view

— Muon

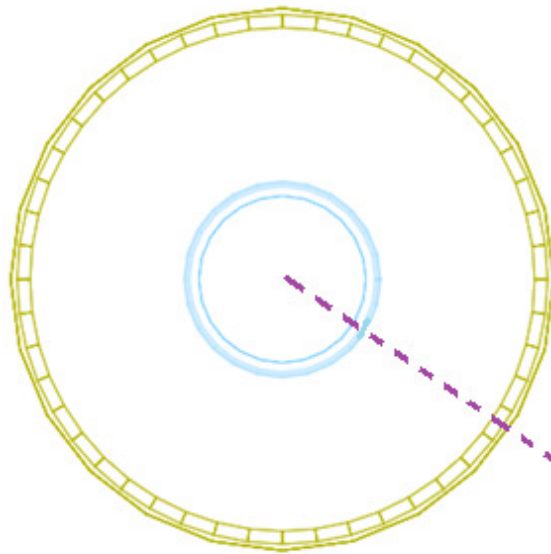
— Electron

--- Missing Et

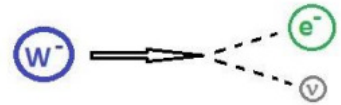
An electron (-) track is already drawn. Add the positron (+) track and energy deposit

Sketch the tracks in CMS.

$$(W^-) \rightarrow e^- \nu$$



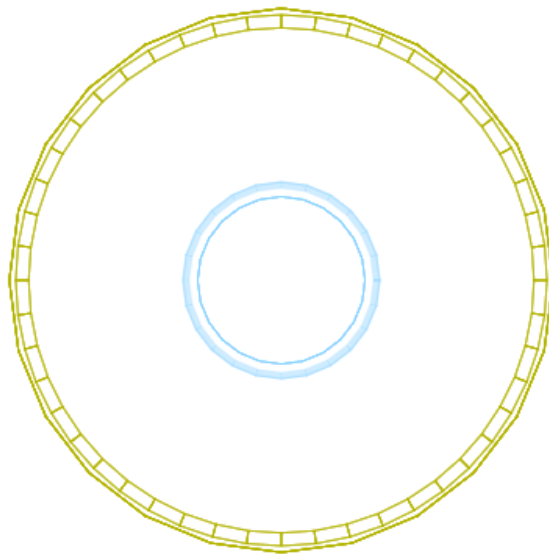
End (x-y) view



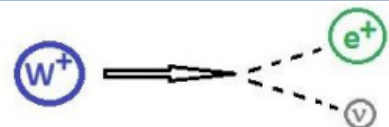
- Muon
- Electron
- - - Missing Et

A Missing Et track, indicating a possible neutrino, is already drawn. Add the electron.

$$(W^+) \rightarrow e^+ \nu$$



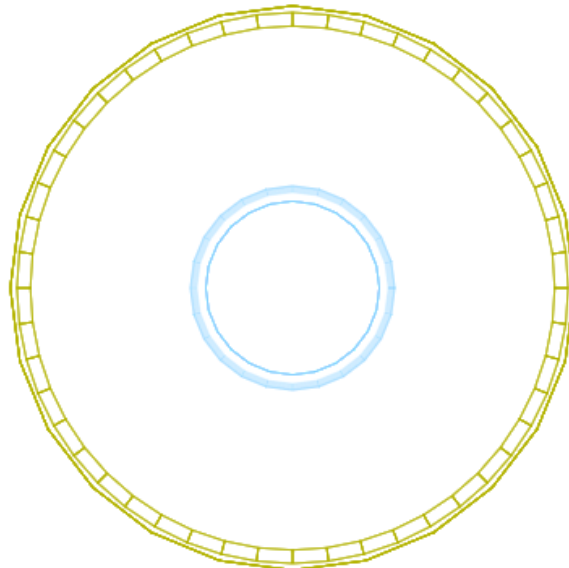
End (x-y) view



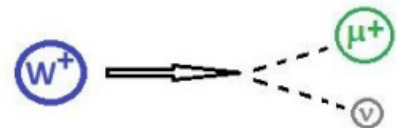
- Muon
- Electron
- - - Missing Et

Sketch the tracks in CMS.

$$(W^+) \rightarrow \mu^+ \nu$$

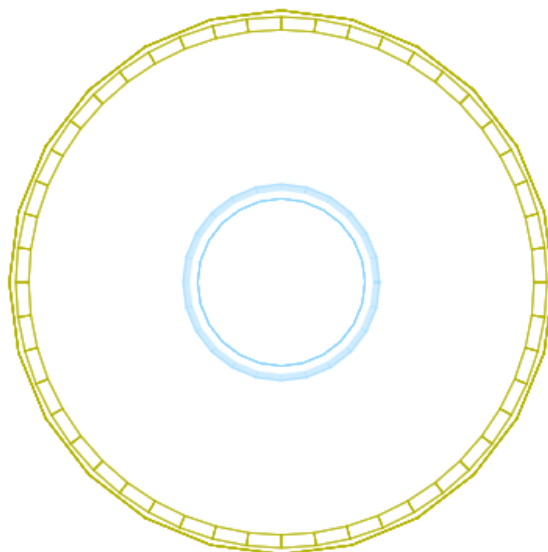


End (x-y) view

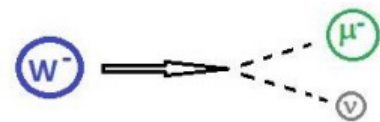


- Muon
- Electron
- - - Missing Et

$$(W^-) \rightarrow \mu^- \nu$$



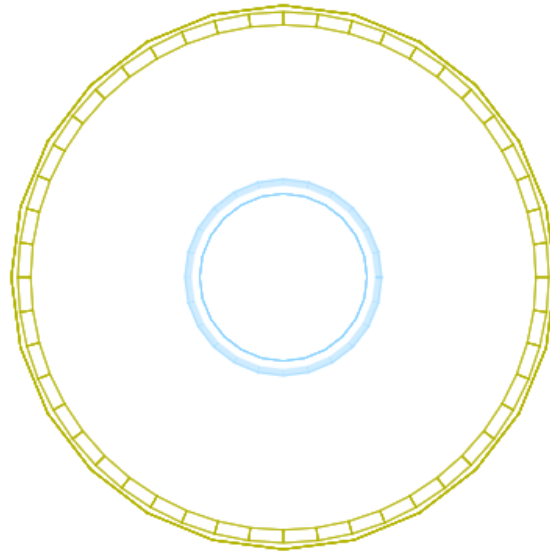
End (x-y) view



- Muon
- Electron
- - - Missing Et

Sketch the tracks in CMS.

$$(H^0) \rightarrow (Z^0 Z^0) \rightarrow 4 \text{ leptons}$$

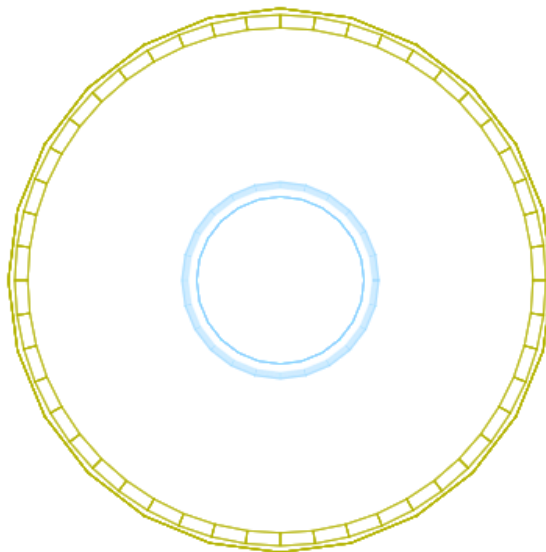


End (x-y) view



- Muon
- Electron
- - - Missing Et

$$(H^0) \rightarrow \gamma\gamma$$



End (x-y) view



- Muon
- Electron
- - - Missing Et