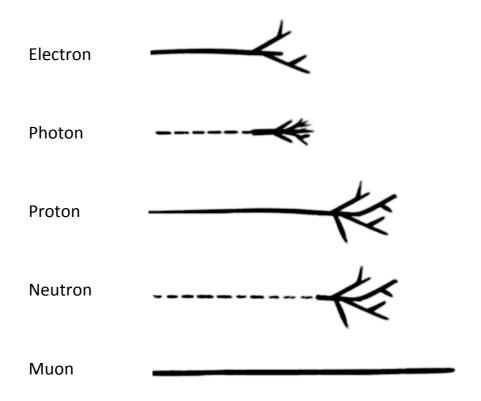
## **LIVERPOOL PHYSICS OLYMPICS**



## **Hunt the Higgs**

Aim	To identify particle tracks that are the result of the decay of a Higgs boson.
Materials	A montage of tracks produced by 70 events in the LHC
Method	Given the characteristic tracks left by different particles and the expected decay of the Higgs boson (see over page) find the events in the montage that correspond to Higgs decays.
Conditions	Give your answer as the coordinates in which the Higgs decays occur, such as A1, B2, C3, etc. You are allowed three attempts to submit the correct answer.
Time Limit	25 minutes
Ranking	The ranking order will be determined by the time taken to submit the correct answer to a marshal, with a 5 minute penalty for the first incorrect or missing event coordinate, plus 10 mins for the second, plus 15 mins for the third, etc.
Team	Result
Do not write below	this line
	Rank

## LHC tracks



The decay of a Higgs boson may result in...

4 electrons

or

4 muons

or

2 electrons + 2 muons