

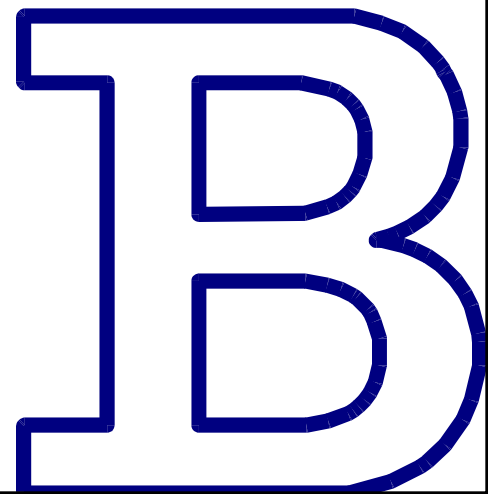
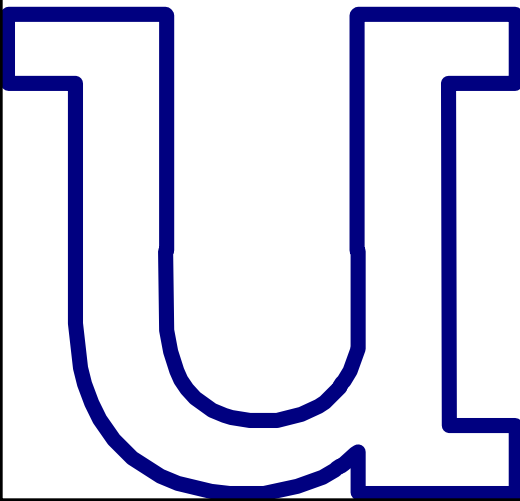


Minerva

Mark Stockton, Pete Watkins
(University Of Birmingham)

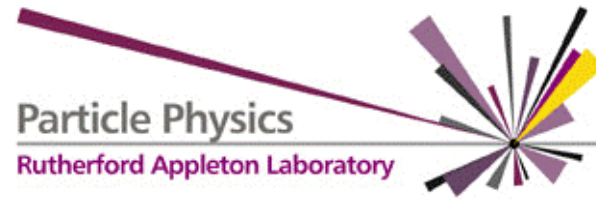
Monika Wielers
(RAL)

High School Teachers 2009,
06/07/2009



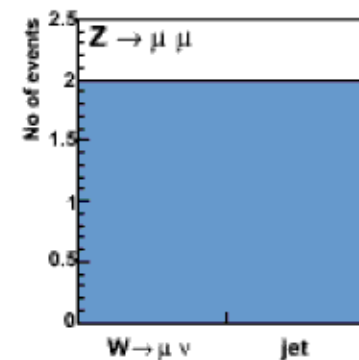
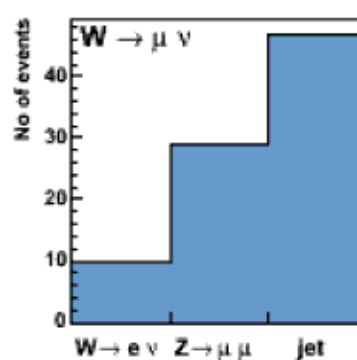
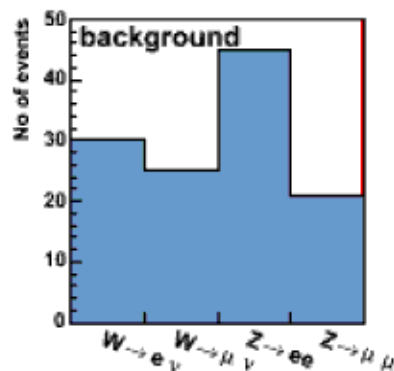
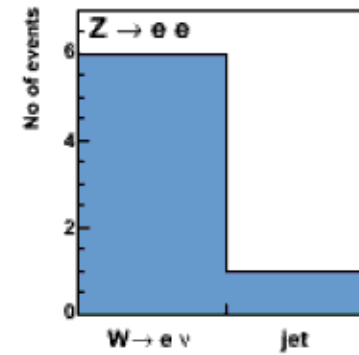
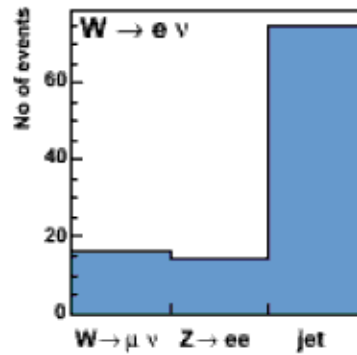
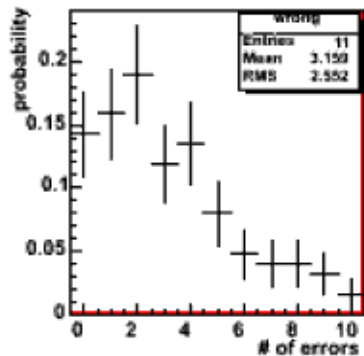
Minerva

- Masterclass software



Results

- In Birmingham we went from an average of 68% in 2008 to 78% after updating the help info
- Don't want to make it too easy (as it isn't in real life!), but don't want them to misunderstand

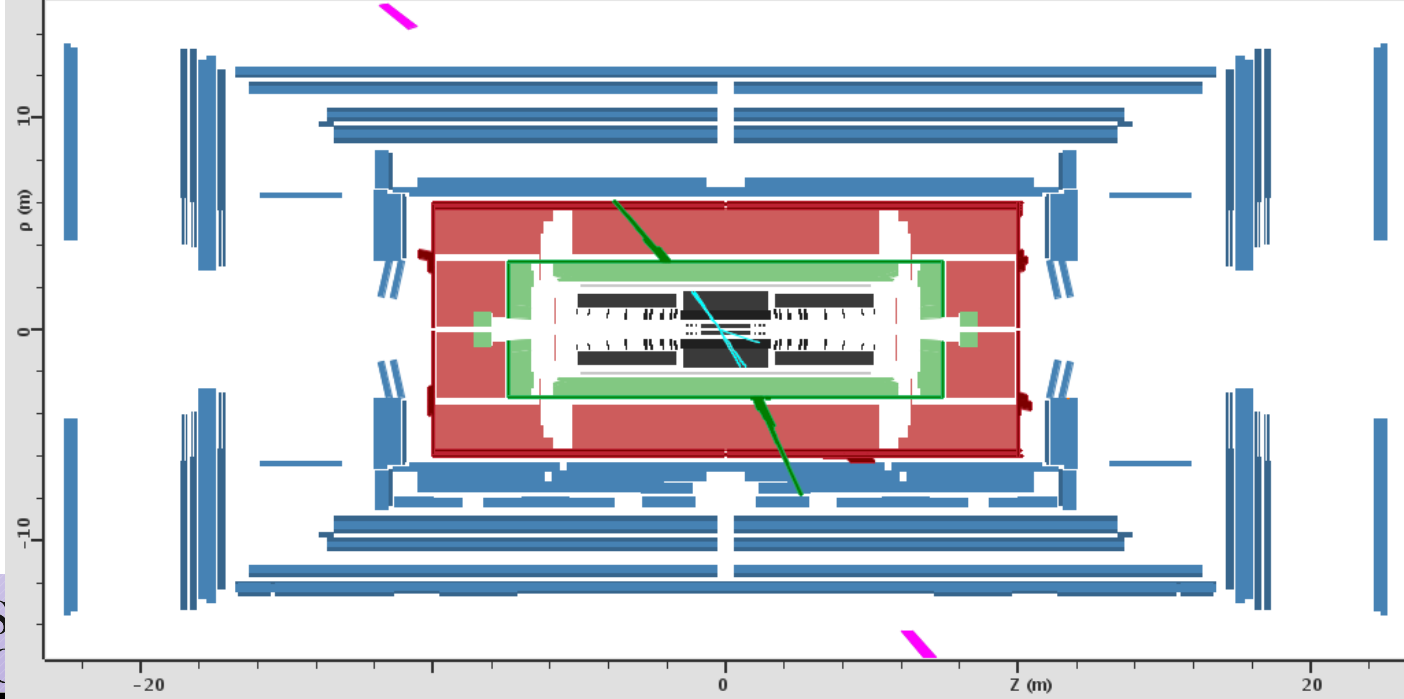
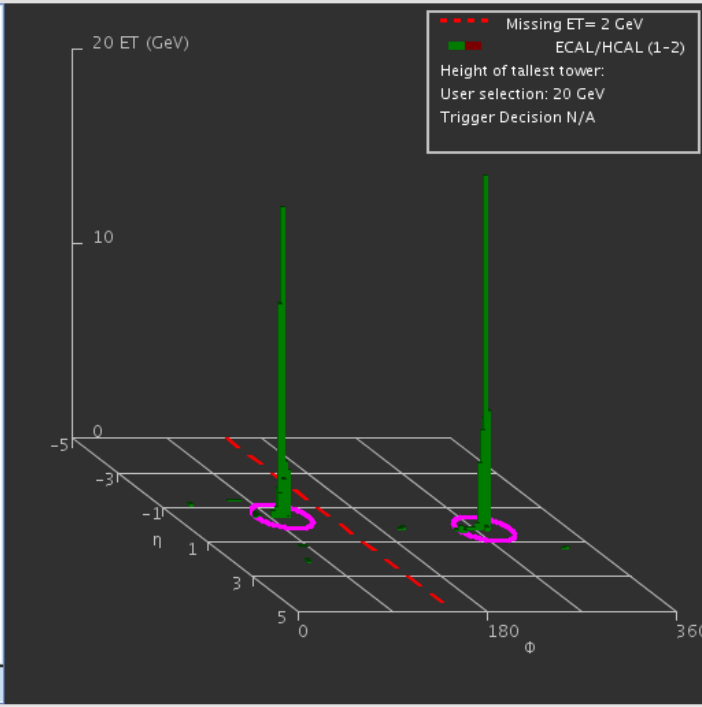
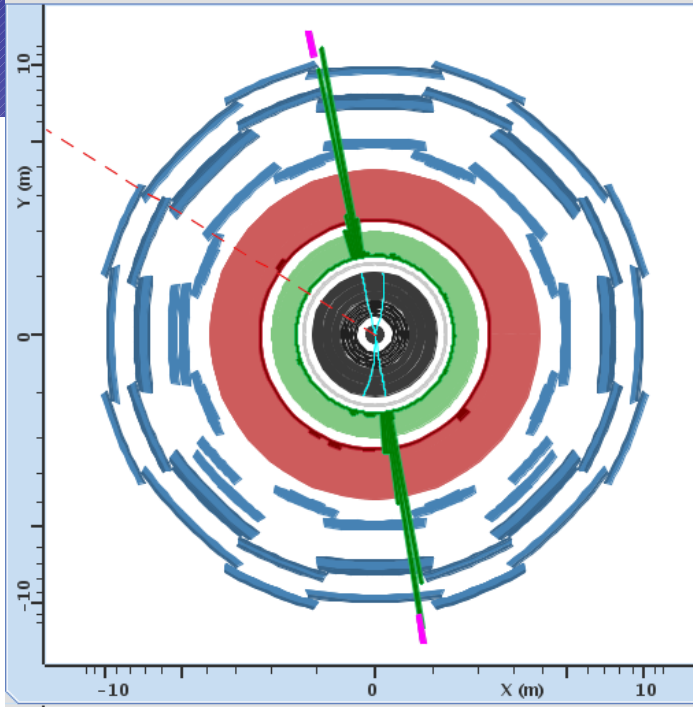


Z-ee

ATLAS

event:Tutorial_Event_3

Atlantis

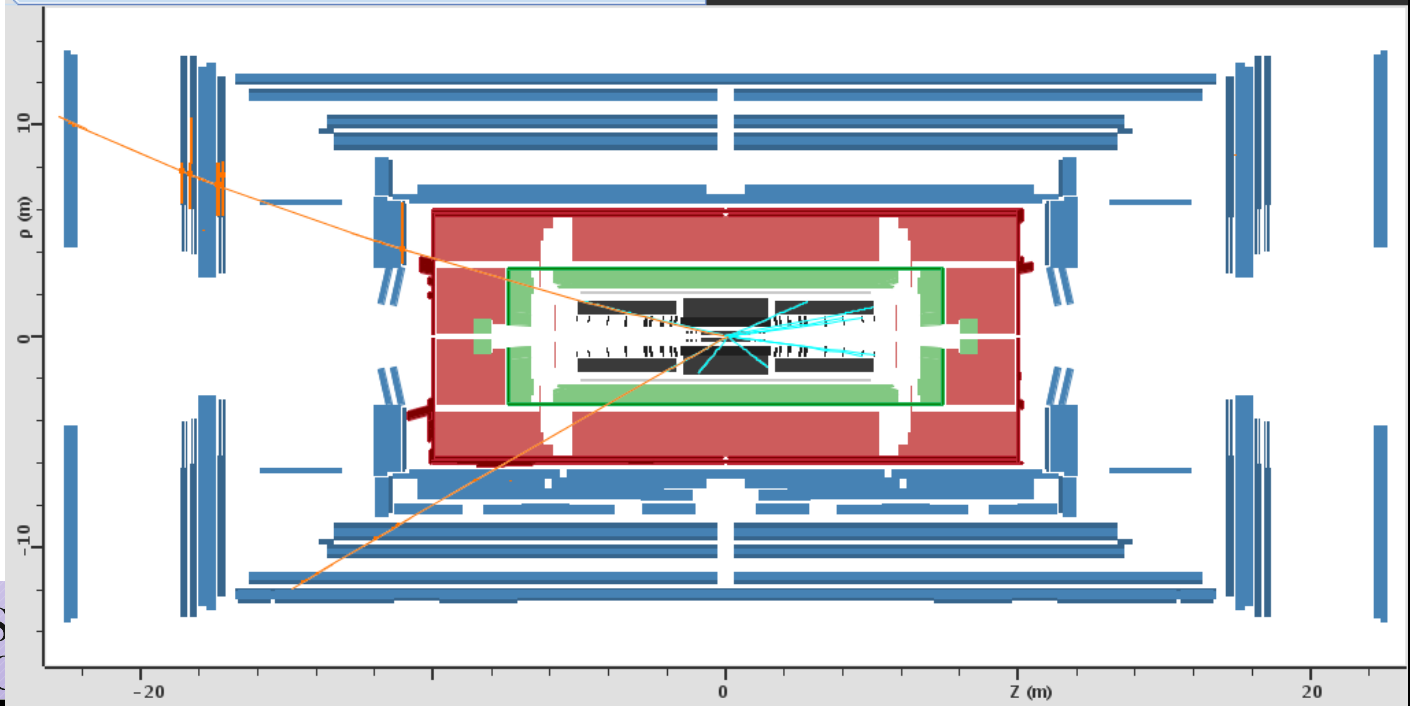
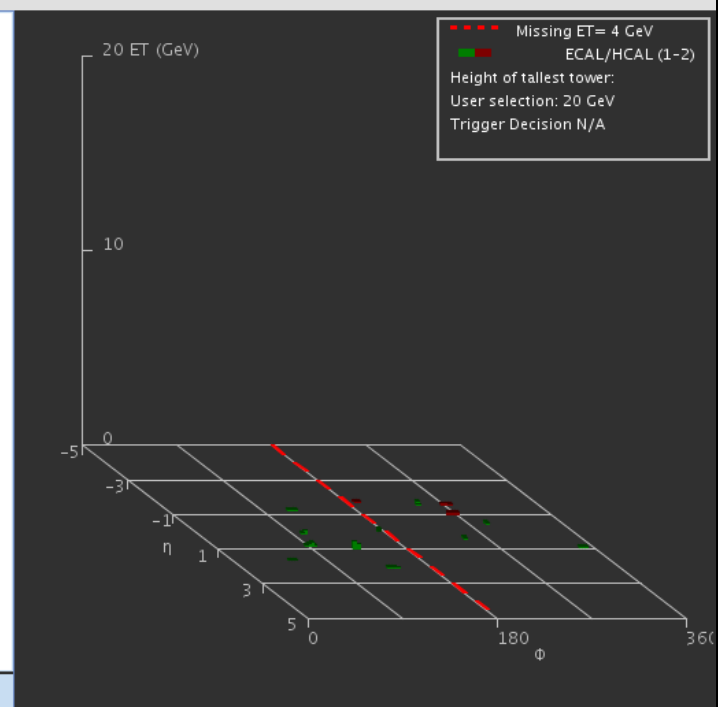
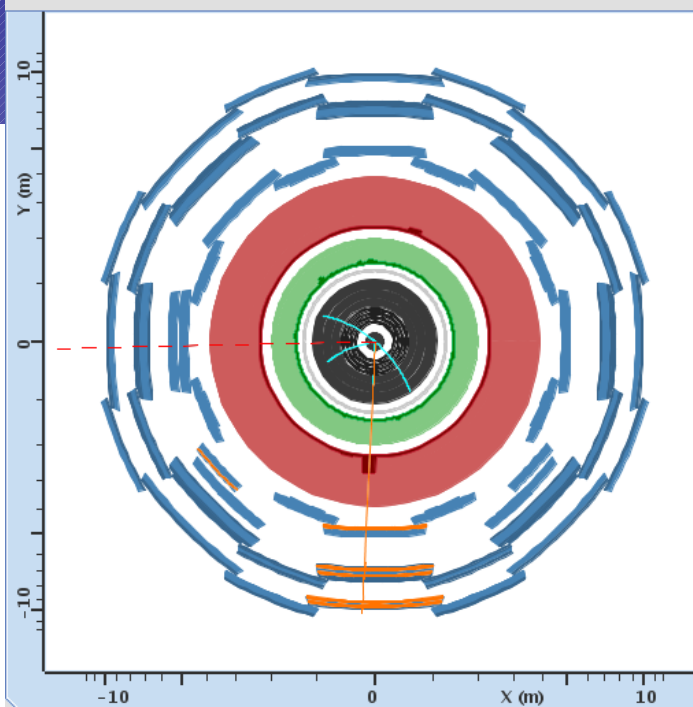


Z-mumu

ATLAS

event:Tutorial_Event_4

Atlantis

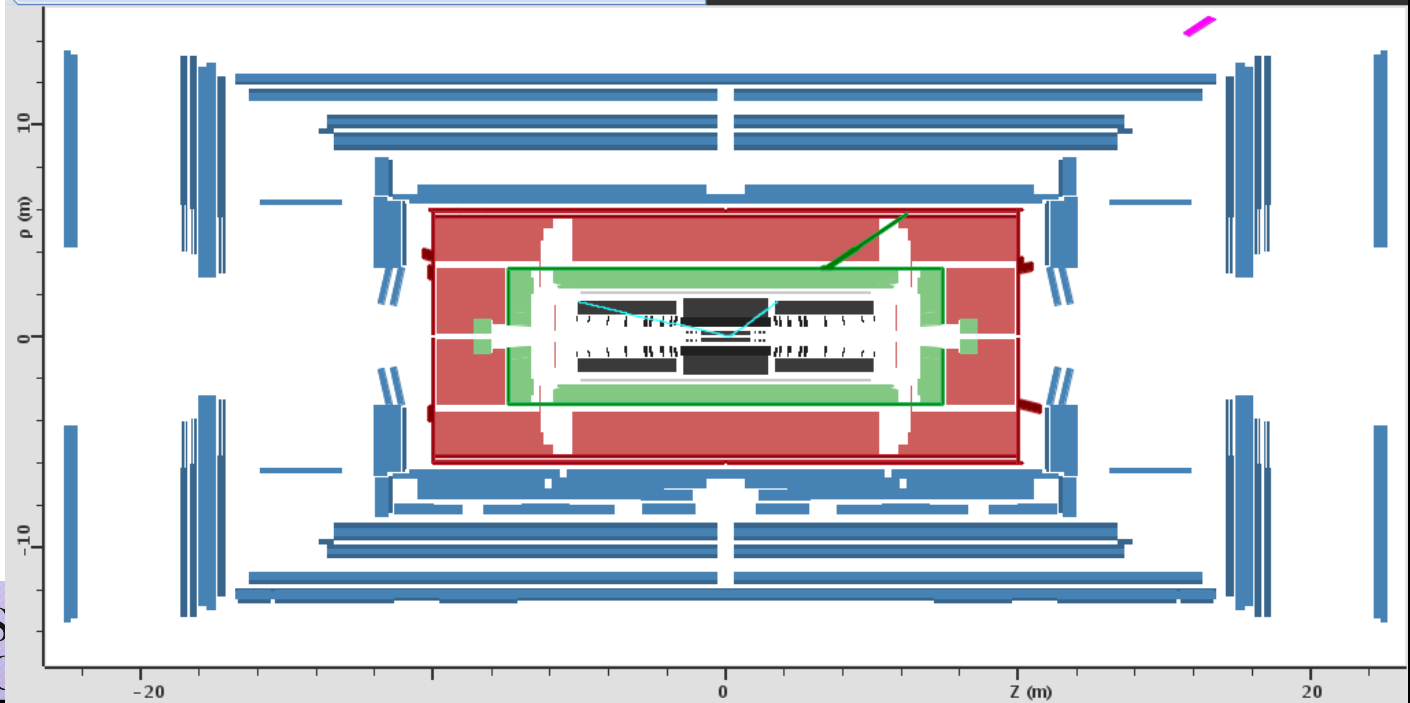
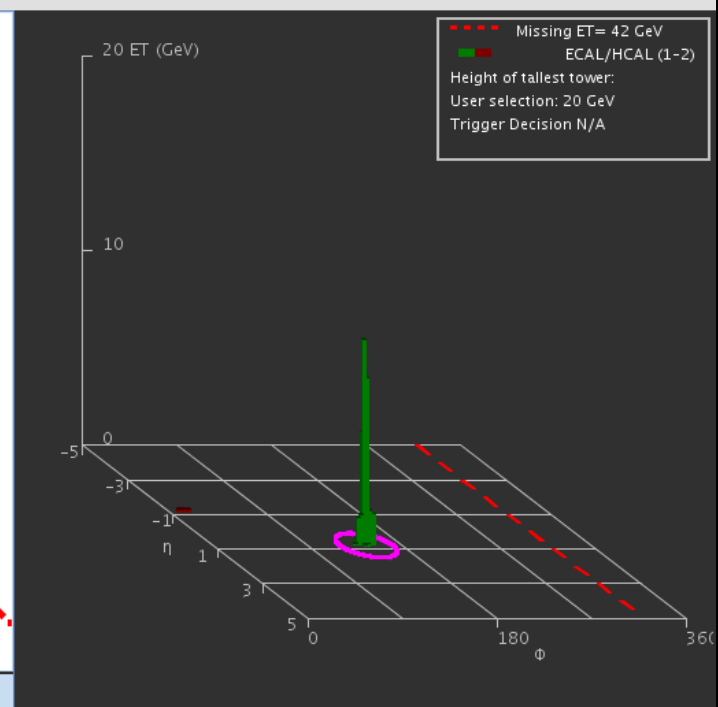
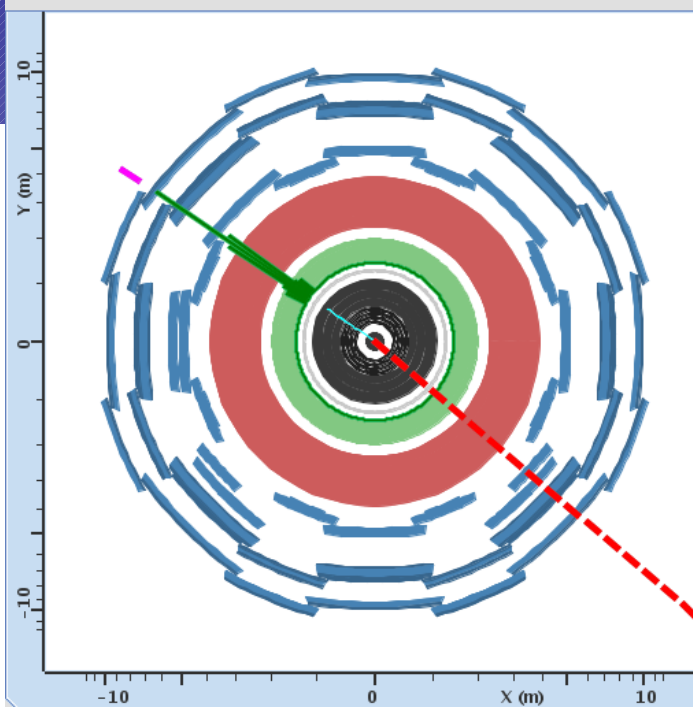


W-enu

ATLAS

event:Tutorial_Event_1

Atlantis

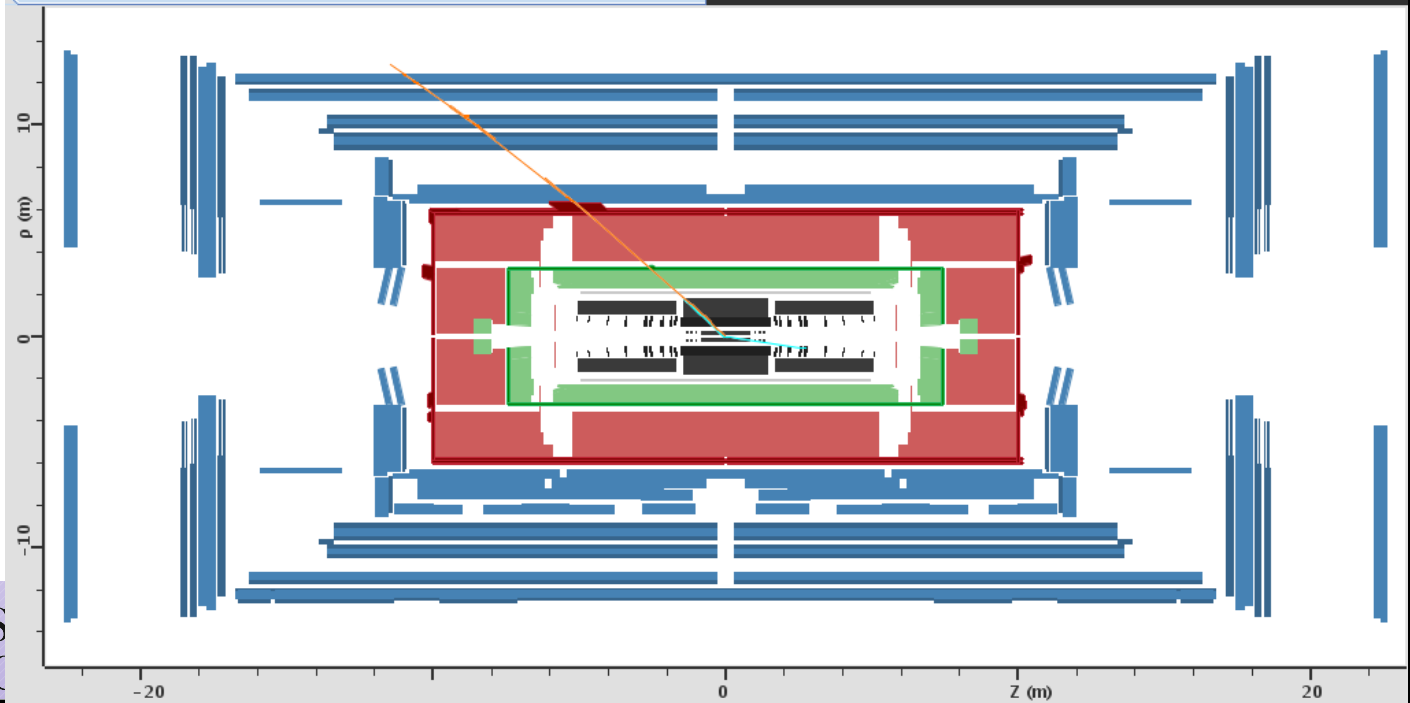
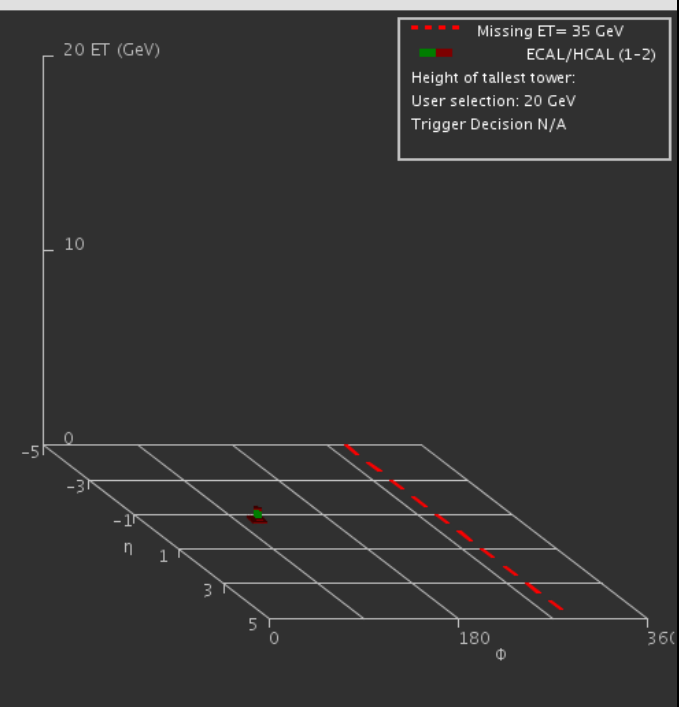
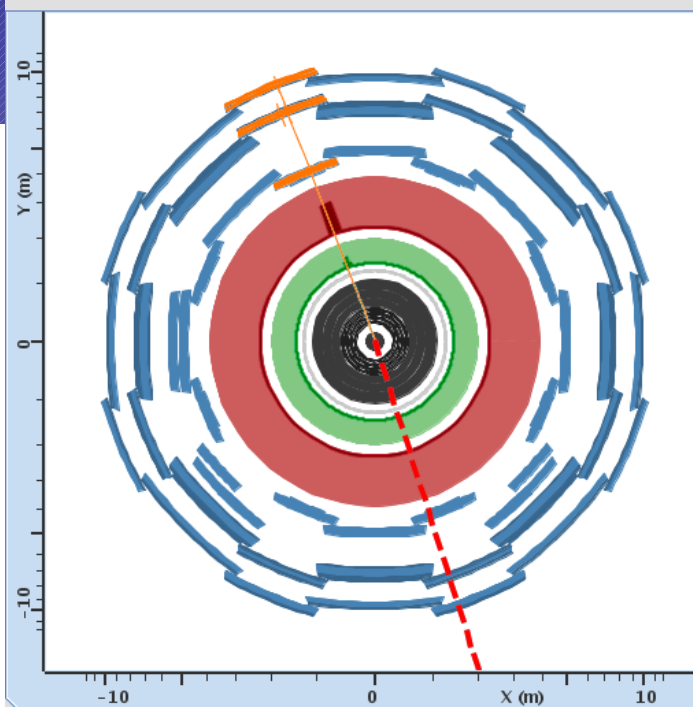


W-munu

ATLAS

event:Tutorial_Event_2

Atlantis

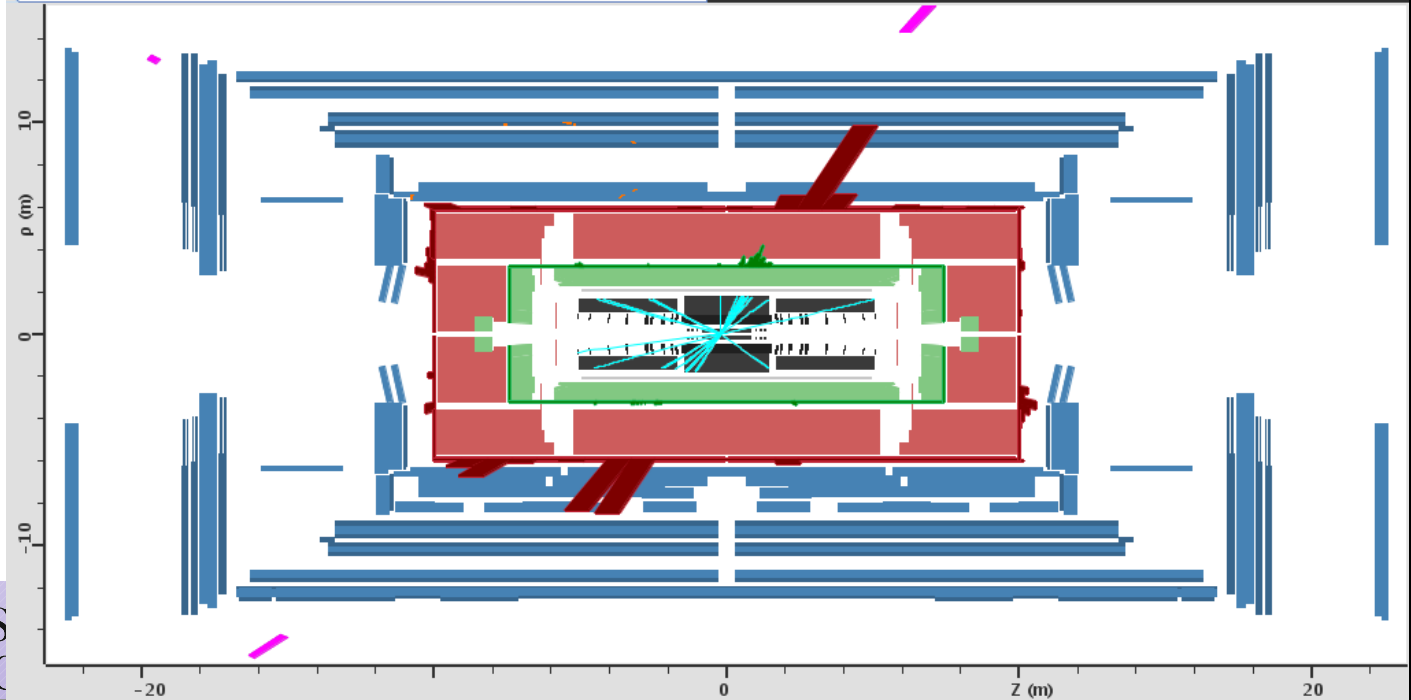
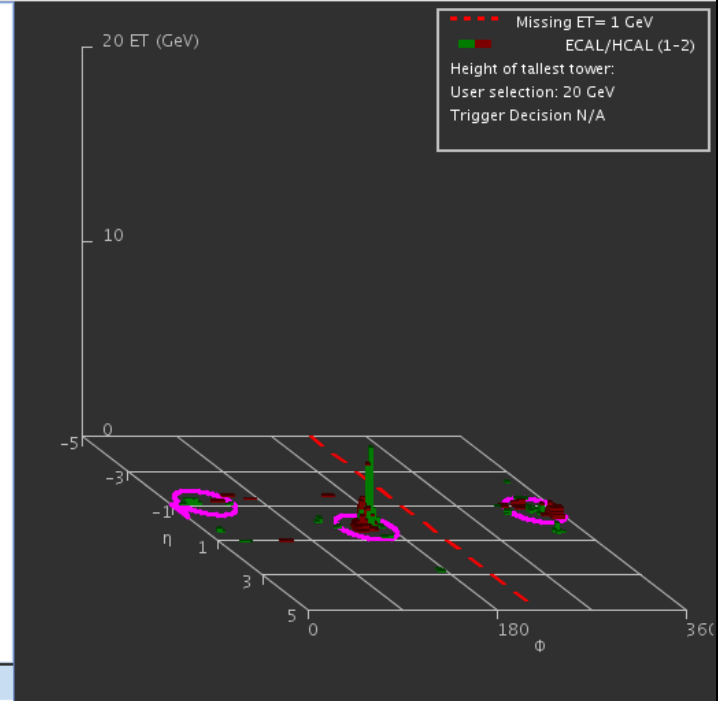
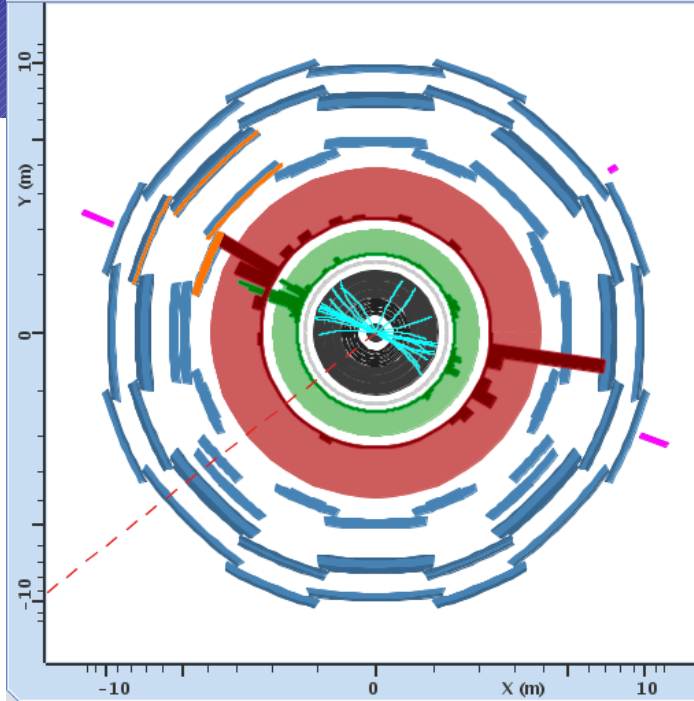


Background

ATLAS

event:Tutorial_Event_5

Atlantis



Use pick to find out the energy of objects

The image shows a screenshot of the Atlantis software interface. The main window displays a detector cross-section with various components highlighted in different colors. A red dashed line indicates a 'Missing ET = 1 GeV' region. A white arrow points to a specific object in the detector view, labeled '2) Click object'. Another white arrow points to the 'Pick' button in the right-hand panel, labeled '1) Click pick'. A third white arrow points to the information displayed in the bottom right corner, labeled '3) Information appears'. A fourth white arrow points to the object in the secondary view, labeled '4) Object turns gray on other views'.

ATLAS event:Event_5 Atlantis

File Preferences Lists Reset Demo Previous Next Help

W 1 2 1 2
B 3 4

Sensors FishEye Clock Scale

Pick

Event Data

MuonDet Objects Geometry
Data Cuts InDet

Name	Value
<input checked="" type="checkbox"/> Status	
<input checked="" type="checkbox"/> InDet	
<input checked="" type="checkbox"/> Calc	

20 ET (GeV)

Missing ET = 1 GeV

Height of ta
User select
Trigger Dec

1) Click pick

2) Click object

3) Information appears

4) Object turns gray on other views

InDetTrack (id: 19 index: 19)
storegate key: CombinedInDetTracks
numHits = 38
 $\phi_0 = 71.388 \pm 0.091^\circ$ (1.246 \pm 0.000 rad)
 $\eta = -1.009$
 $pT = 1.97$ GeV



Masterclass INvolving Event Recognition Visualised with Atlantis.



MINERVA is a masterclass tool for students to learn more about the ATLAS experiment at CERN. It is based on a simplified setup of the ATLAS event display, Atlantis, which allows users to visualise what is happening in the detector. The aim is to look at ATLAS events and try to recognise what particles are seen in the detector. There are tutorial events, then a selection of events to categorise and finally a search for the Higgs! The project is a joint venture between the Rutherford Appleton Laboratory (RAL) and the University of Birmingham.

The Higgs search section is currently under construction



Minerva was the Roman name of Greek goddess Athena. She was considered to be the virgin goddess of warriors, poetry, medicine, wisdom, commerce, crafts, and the inventor of music

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CERN Web Services

