

# HEP Visualisation and the Media

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## 1 Introduction

HEP Physics visualisation is useful not only for physics but also for the Press. Event displays have become the trademark of Particle Physics to such an extent that any article on the subject has an event display. This is wonderful and I congratulate all working in visualisation because they have created a situation where complete strangers to particle physics intuitively capture the excitement of our research. I will show a large number of transparencies of articles from major newspaper and magazines from all over the world which have used event displays. The fact that there was no event display to illustrate the recent creation of the first antihydrogen atoms at CERN was met by loud groans and low curses from the world press. In this talk I will try and analyse, in media terms, what makes an event display successful, what to avoid, and make some suggestions for the future.

## 2 What the Press wants from HEP Visualisation

All written Press is becoming increasingly visual. Frequently it is the photo that sells the story, more than the subject matter. This means a key person in the publication of physics articles is the photo editor. This person knows nothing about physics and will choose the photo purely on aesthetic criteria. What do these people like? They like event displays which intuitively show the effects of a collision. All the displays of the LEP experiments have been successful in this, you don't have to know anything about physics to realise that you are looking at sprays of particles. Some events are more successful than others: strong colours and bars of colour are popular. It is also important that the event display shows, if possible, why the event is interesting. The first events showing Zs and Ws in UA1 were a jumble of tracks with no indication of where the important tracks were. A wasted opportunity. The most popular event display of the last 2 years which has been featured on innumerable front covers, is a simulation of the disintegration of a Higgs boson into 4 leptons. The event is clearly the result of a particle collision, it has the colour and the 4 muons stand out clearly from the other tracks, highlighting what is important in the event. The CERN Press Office still sends out more bubble chamber events than any others. I am sure this is because these events have many more spiral forms than more modern displays, which perhaps appeal to the sensual nature of photo editors.

## 3 What the Press never uses

Events which do not communicate the explosive nature of particle collisions are never used. Lego charts are never used. Abstract representations where tracks are not clearly identifiable are never used. Events where there is too much solid detector geometry are unpopular, as are events with too high density of tracks, for example, untreated LHC and heavy-ion tracks.

## 4 For Television

TV loves movement and predictably wants event displays which rotate and zoom. At the moment there is one event which has a virtual monopoly of TV exposure. Two straight lines head towards each other from either side of the screen. They collide and lots of different

coloured tracks are created which then rotate. Another 2 lines appear a different event is generated and so on.

## **5 Conclusion**

HEP Visualisation plays an essential role in the publicising of particle physics. It helps to project an image of a science which is vigorous and leads to moral and eventually financial support. Experiments must continue to devote resources to visualisation and design event displays which, whilst not compromising the scientific integrity, will catch the eye of the all-important photo editor.