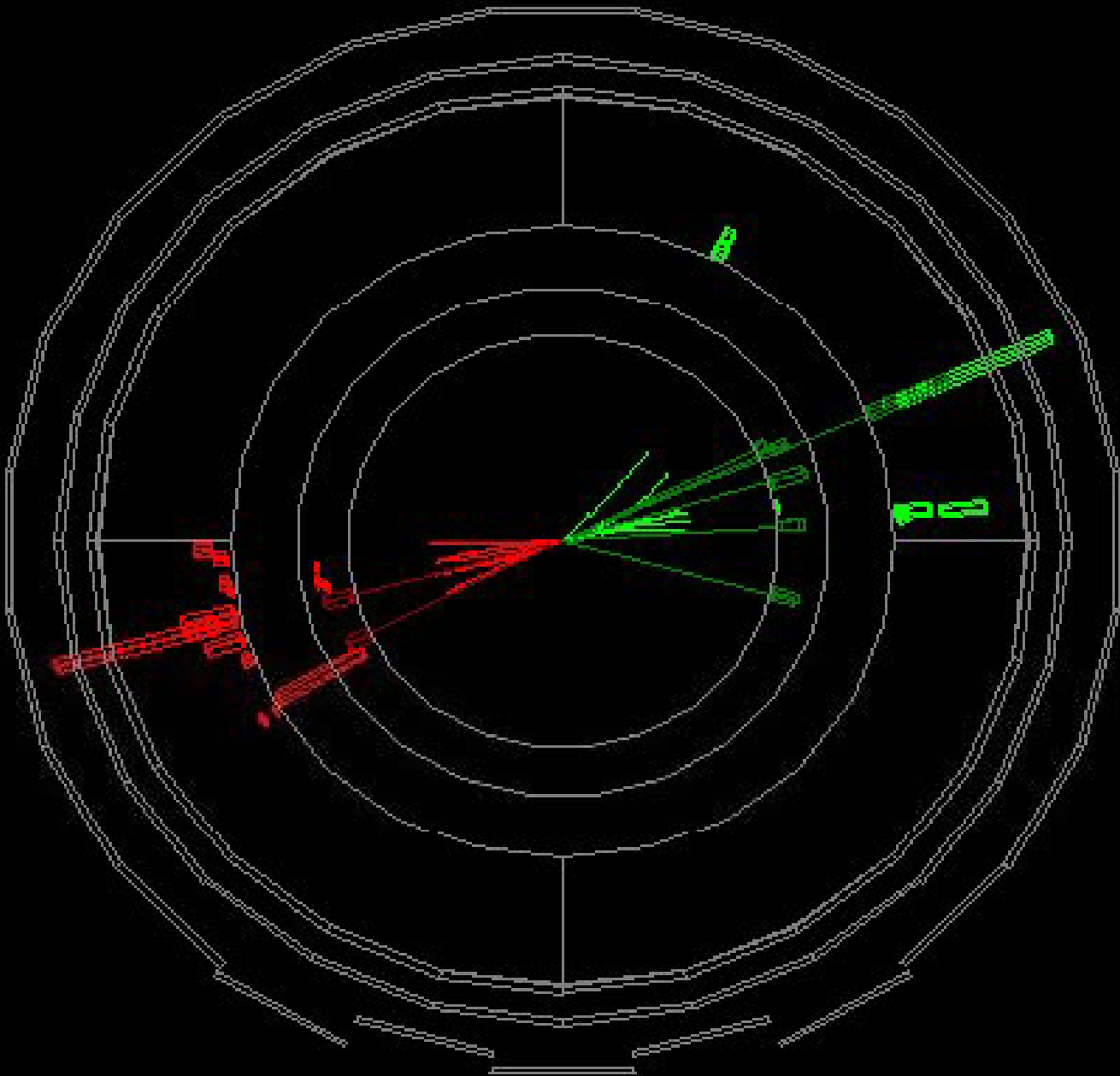
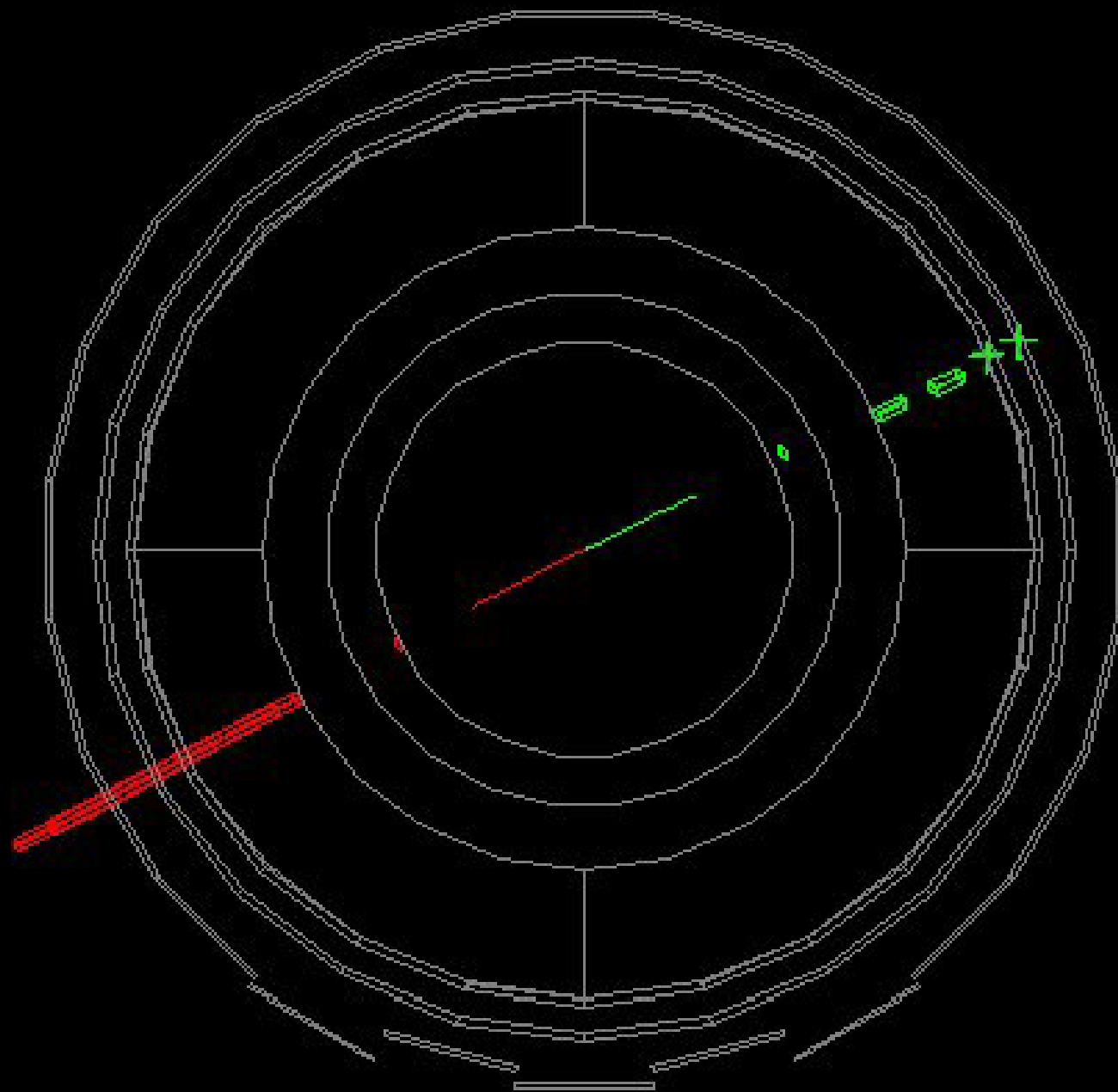


DELPHI goes to school

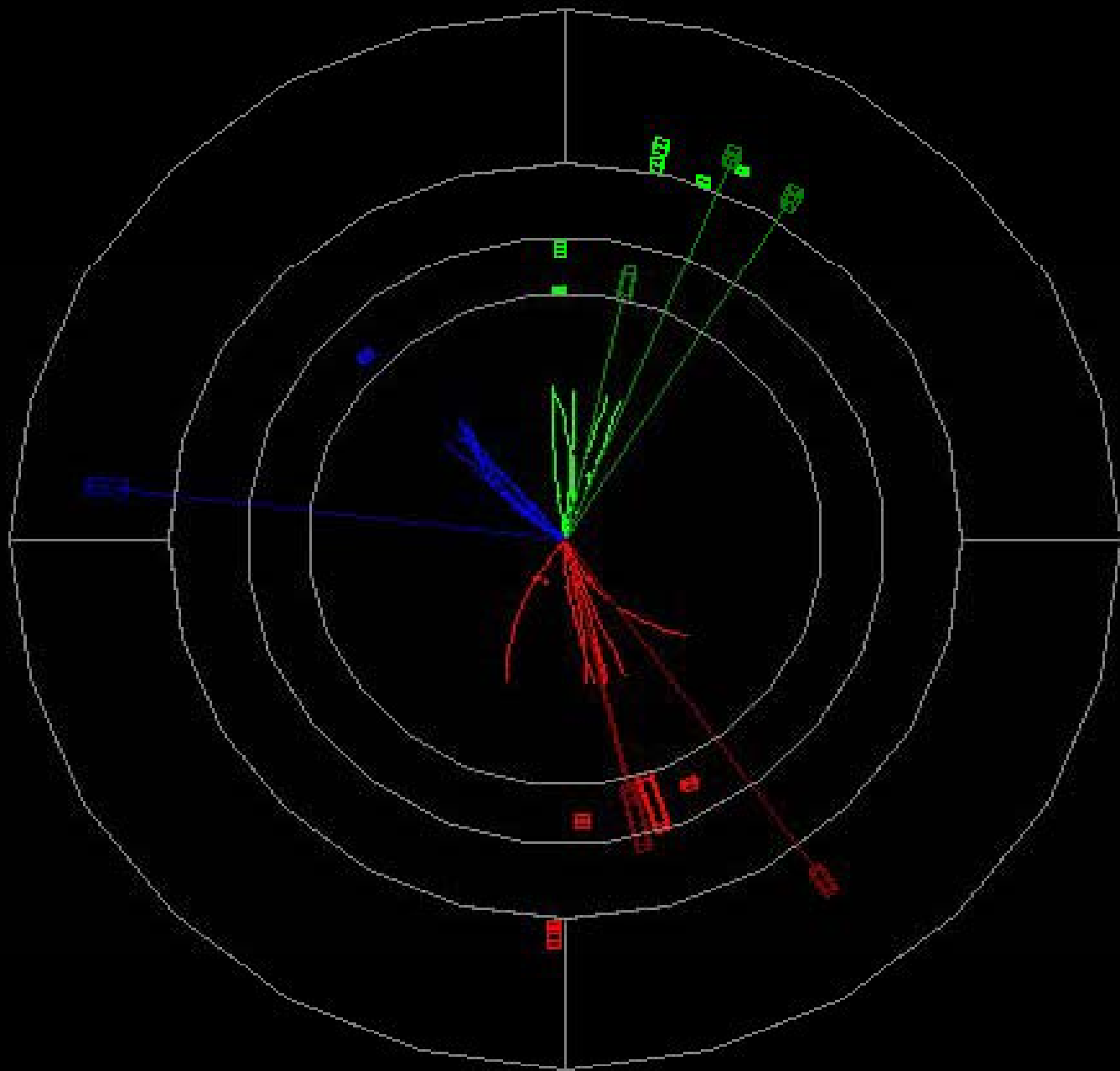
- An innovative education project using DELPHI data
 - Real DELPHI events to explore quarks, leptons and gluons
 - Actually practically the whole Standard Model
- Idea and first prototype, 2005-2006
 - Hands on CERN (hands-on-cern.physto.se)
 - Event display: Marc Dönszelmann
- Pedagogical improvements during the years
- Hands on CERN is still going strong – healthier than ever! (Touch wood!)



Erik Jo



Erik .



European Particle Physics Masterclasses

- European science project for school
 - The European Particle Physics Masterclasses
 - 2008 (4th year)
 - ~ 6000 students in 2008
 - 92 institutes in 21 countries
 - In total around 16 000 students during the 4 years
- Example of frontline physics goes to school
- Involves hundreds of particle physicists every year
 - A great success!

We made it
again!



EPS 27-28 March 2008

Hands on CERN awards

Scientific American .com
One of the best physics site 2004



2005 Webby Award
Science category

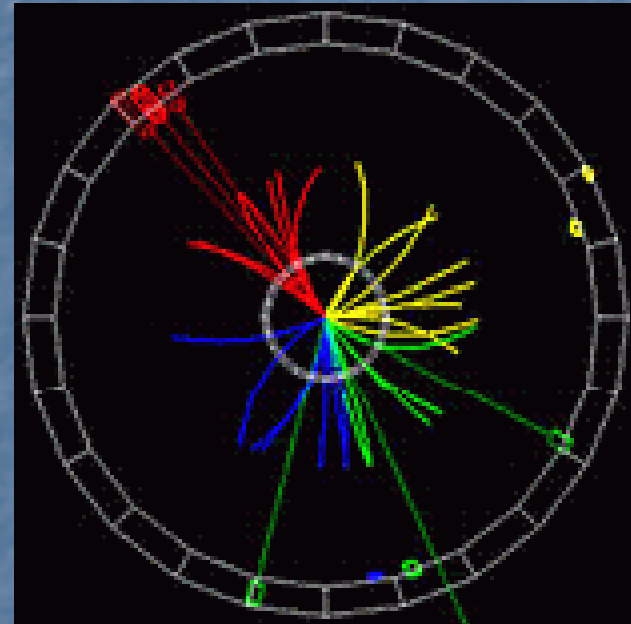


A physicist on Broadway – an unusual event

Erik Johansson

Information, publications

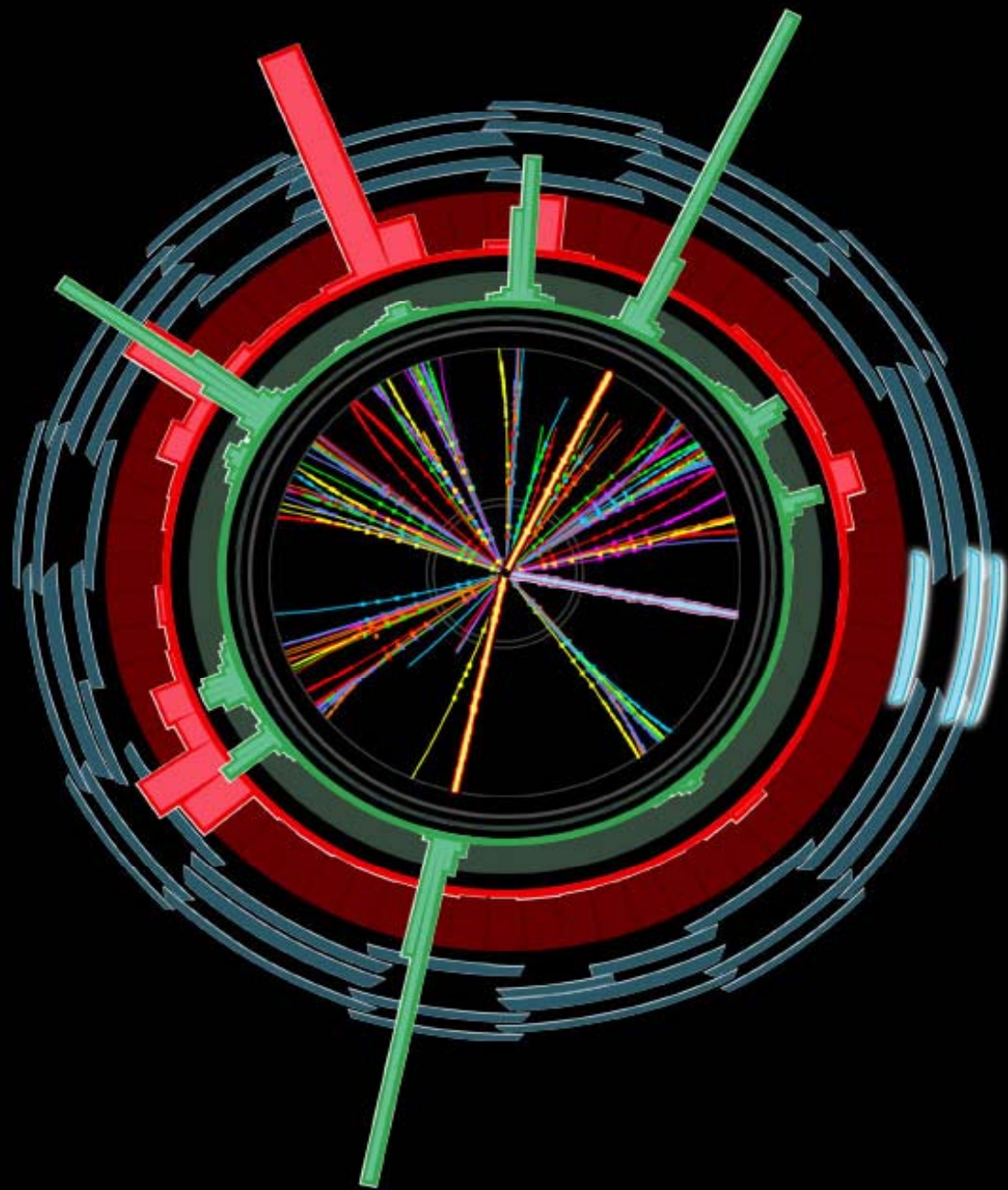
- <http://www.physicsmasterclasses.org>
- Hands on CERN <http://hands-on-cern.physto.se>
- Hands on CERN – a well-used physics education project, Erik Johansson, *Physics Education* 41 (2006) 250-254
- European Particle Physics Masterclasses make Students Scientists for a Day, Erik Johansson, Michael Kobel et al, *Physics Education* 42(2007) 636-644



ASEC

ATLAS Student Event Challenge

Erik Johansson



Erik Johansson

Summary

- DELPHI events are still in use
- Introduce the Standard Model with real particle data
- Hands on CERN together with European Masterclasses (now International) is a great success
- The students appreciate "the real thing", ie real experimental data
- ATLAS follows in the foot steps of DELPHI