

## April 2008

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# U.S. Student Journalism Program

**April 2-7, 2008**

**High schools submitted proposals to send a team of three students and a teacher to report on the LHC startup. The six selected teams had all major expenses paid.**

**The student/teacher teams learned about the LHC, ATLAS and CMS experiments by interviewing physicists and engineers and seeing the experiments up close.**

**Teams were news reporters to students in their home communities and across the US. These high school journalists shared the excitement with many others via blogs, websites, and videos.**

## U.S. Student Journalism Program



Erik Johansson at EPPOG in Prague



# Future science journalists?



E. Johansson and M. Barnett, April 2008 Erik Johansson

APR 5 2008



# News of The ATLAS Experiment

Mapping the Secrets of the Universe

RSS 2.0  
Coming soon

- HOME
- ATLAS Collab.
- Press
- Students
- Tours
- Director
- Webcams
- Pages
- Site
- Media
- Tube
- Virtual Tour
- ATLAS Store
- ATLAS eNews
- File Transfer
- History of CERN
- Library
- Public Comm.
- Links
- Contact Us

## Featured Story



### ATLAS completes world's largest jigsaw puzzle

[See CERN press release](#)

Celebrations are underway in the ATLAS Experiment, as the final element of the detector was lowered into the cavern on Friday February 29th, 2008. The second "small wheel" is also the final part of the muon subsystem, but the wheels themselves are small in name only.

[February 2008]

[More on this story...](#)

## Other Headlines

[Intrepid Rappellers Descend Into ATLAS Cavern](#)  
[February 2008]



[Cables: The 'blood vessels' of ATLAS](#)  
[January 2008]



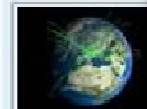
[Progress on Toroid Magnets](#)  
[December 2007]



[Rolling Stone Brazil visits ATLAS](#)  
[December 2007]

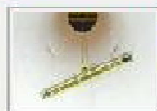


[Dress Rehearsal for ATLAS debut](#)  
[December 2007]



[Earlier Headlines...](#)

## ATLAS video features



The pixel detector is lowered into the ATLAS cavern

[Muon wheel](#)

[Toroid magnet](#)

## ATLAS webcams

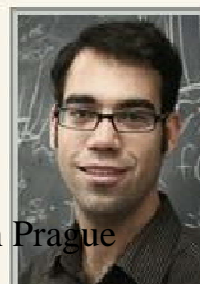


View what's happening in the ATLAS cavern with the ATLAS webcams.

## ATLAS detector overview

## Features

Featured ATLAS profiles



[Read about Kyle](#)

## Other LHC News

[CERN press releases](#)  
[CMS Experiment news](#)

## FAQs

[View ATLAS FAQs](#)

Send your question to us!

Name:

Question:

Erik Johansson at EPPOG in Prague

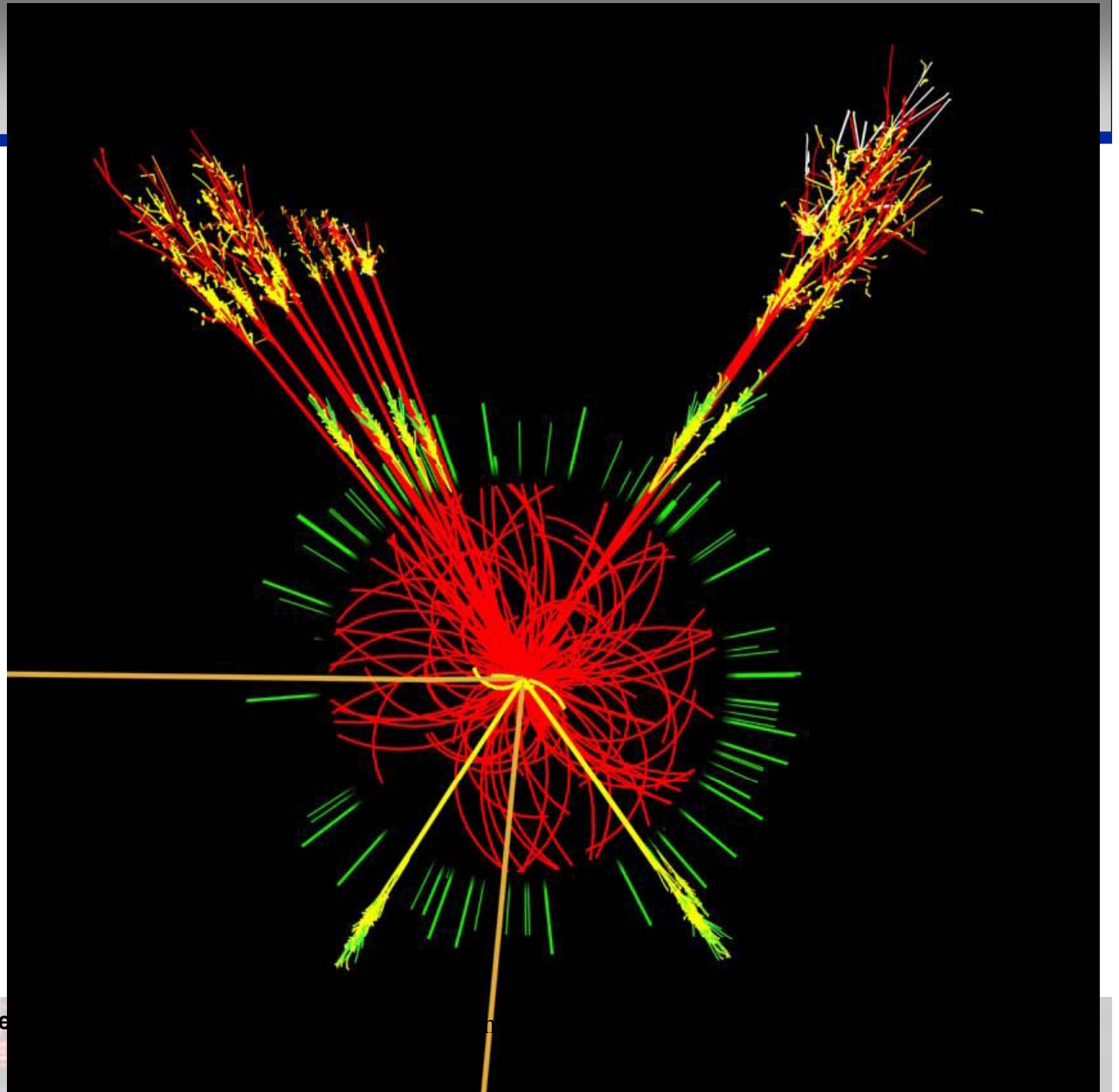


# 2007 The ATLAS Megahit Year

## Hits on ATLAS Website

<u>Year</u>	<u>Hits</u>	
1999	112,694	+++
2000	183,669	+++++
2001	287,992	+++++++
2002	390,541	+++++++
2003	505,549	+++++++
2004	519,731	+++++++
2005	579,186	+++++++
2006	911,122	+++++++
2007	1,263,358	+++++++

# New Higgs Event Images



# ATLAS on YouTube

[YouTube.com/TheATLASExperiment](https://www.youtube.com/TheATLASExperiment)

**18 videos.**

**Top one has 14,500 viewings.**



[Videos](#) | [Playlists](#) | [Groups](#)

### The ATLAS Experiment



#### TheATLASExperiment

Style: News

Joined: **June 19, 2007**Last Login: **2 days ago**Videos Watched: **79**Subscribers: **170**Channel Views: **11,335**

DIRECTOR

ATLAS is a particle physics experiment that will explore the fundamental nature of matter and the basic forces that shape our universe. Starting in mid-2008, the ATLAS detector will search for new discoveries in the head-on collisions of protons of extraordinarily high energy. ATLAS is one of the largest collaborative efforts ever attempted in the physical sciences. There are 2100 physicists (Including 450 students) participating from more than 167 universities and laboratories in 37 countries. Visit <http://atlas.ch>

Name: **ATLAS**City: **Geneva**Hometown: **CERN**Country: **Switzerland** Website: <http://atlas.ch>[Report profile image violation](#)

#### **ATLAS - Episode 1 - A New Hope**

From: [TheATLASExperiment](#)

Views: 14,433

Comments: [10](#)

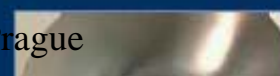
### Connect with TheATLASExperiment

[The Official ATLAS Experi...](#) [Send Message](#) [Share Channel](#)

### Videos (18)

[Subscribe to TheATLASExperiment's videos](#)Videos | [Most Viewed](#) | [Most Discussed](#) 

Erik Johansson at EPPOG in Prague





**ATLAS - Episode 1 -A New Hope**

07:13

Added: 9 months ago  
Views: 14,493

★★★★★  
54 ratings



**Protons Accelerate in LHC and Co...**

00:30

Added: 9 months ago  
Views: 12,017

★★★★★  
23 ratings



**ATLAS - Episode 2 -The Particles...**

09:45

Added: 9 months ago  
Views: 11,828

★★★★★  
67 ratings



**Aftermath of Proton Collision in...**

00:05

Added: 9 months ago  
Views: 8,467

★★★★★  
13 ratings



**ATLAS - Episode 2 - The Particle...**

04:24

Added: 9 months ago  
Views: 7,216

★★★★★  
46 ratings



**The ATLAS Experiment - Mapping t...**

09:52

Added: 9 months ago  
Views: 4,977

★★★★★  
33 ratings



**The ATLAS Experiment - Mapping t...**

08:51

Added: 9 months ago  
Views: 3,267

★★★★★  
26 ratings



**A Sweeping View of the ATLAS Det...**

00:15

Added: 9 months ago  
Views: 3,083

★★★★★  
7 ratings



**Riding a Toroid Magnet into the ...**

01:30

Added: 9 months ago  
Views: 2,028

★★★★★  
3 ratings



**From Space to LHC to the ATLAS D...**

00:45

Added: 9 months ago  
Views: 1,368

★★★★★  
5 ratings



**Moving the Calorimeter into the ...**

00:10

Added: 9 months ago  
Views: 1,362

★★★★★  
2 ratings



**The ATLAS Crawl - A short journe...**

02:03

Added: 8 months ago  
Views: 807

★★★★★  
3 ratings



**Constructing a Giant Muon Wheel...**

00:11

Added: 9 months ago  
Views: 774

★★★★★  
3 ratings

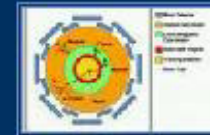


**The Black Eyed Peas visit ATLAS**

00:14

Added: 9 months ago  
Views: 630

★★★★★  
2 ratings



**Zooming into the ATLAS Detector ...**

00:42

Added: 9 months ago  
Views: 507

★★★★★  
1 rating



**Insertion of the pixel detector ...**

00:29

Added: 8 months ago  
Views: 461

★★★★★  
4 ratings



**Lowering an End-cap Toroid Magne...**

00:31

Added: 2 months ago  
Views: 283

★★★★★  
3 ratings



**Joining Major Elements of Inner ...**

00:24

Added: 9 months ago  
Views: 268

★★★★★  
3 ratings

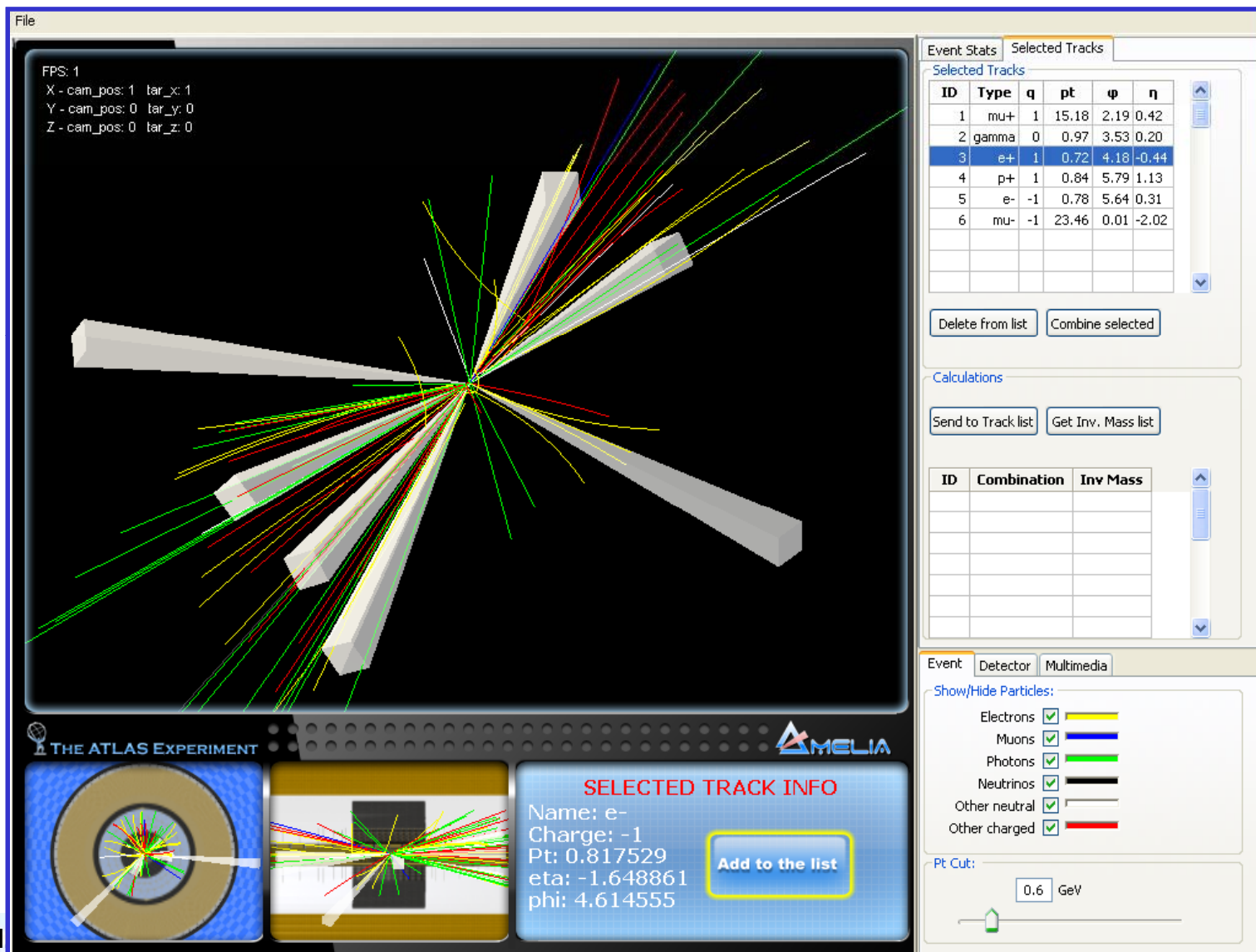
Erik Johansson at EPPOG in Prague



# Student Event Analysis (AMELIA)

Interactive  
event  
analysis  
for  
students  
and public

ATLAS  
Multimedia  
Educational  
Lab for  
Interactive  
Analysis



FPS: 1  
X - cam\_pos: 1 tar\_x: 1  
Y - cam\_pos: 0 tar\_y: 0  
Z - cam\_pos: 0 tar\_z: 0

ID	Type	q	pt	$\phi$	$\eta$
1	mu+	1	15.18	2.19	0.42
2	gamma	0	0.97	3.53	0.20
3	e+	1	0.72	4.18	-0.44
4	p+	1	0.84	5.79	1.13
5	e-	-1	0.78	5.64	0.31
6	mu-	-1	23.46	0.01	-2.02

Delete from list    Combine selected







Calculations

Send to Track list    Get Inv. Mass list

ID	Combination	Inv Mass

Event    Detector    Multimedia

Show/Hide Particles:

- Electrons  
- Muons  
- Photons  
- Neutrinos  
- Other neutral  
- Other charged  

Pt Cut:  GeV

**SELECTED TRACK INFO**  
Name: e-  
Charge: -1  
Pt: 0.817529  
eta: -1.648861  
phi: 4.614555  
[Add to the list](#)



# Student Event Analysis (AMELIA)

Interactive event analysis for students and public

ATLAS  
Multimedia  
Educational  
Lab for  
Interactive  
Analysis

File

FPS: 4  
X - cam\_pos: 1 tar\_x: 0  
Y - cam\_pos: 0 tar\_y: 0  
Z - cam\_pos: 0 tar\_z: 0

Event Stats Selected Tracks  
Event: Higgs4L\_11.0.5\_5300\_00365.xml

	Total	Shown
Tracks	948	119
Neutral	436	13
Charged	506	33
Photons	291	34
Neutrinos	2	0
Muons	6	4
Showers	92155	0
E_mis	0.00	

Event Detector Multimedia

Show/Hide Particles:

- Electrons
- Muons
- Photons
- Neutrinos
- Other neutral
- Other charged

Pt Cut:  GeV

THE ATLAS EXPERIMENT AMELIA

## Intro

### Unprecedented Energies

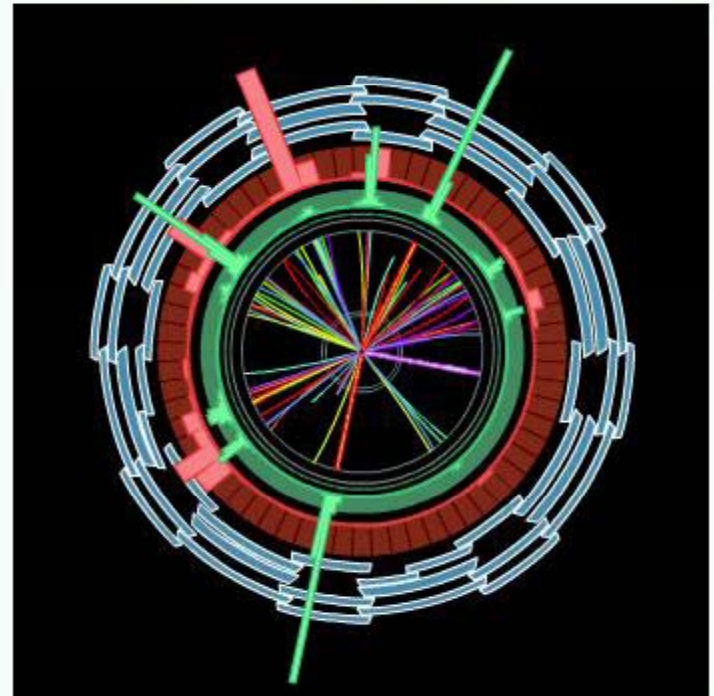
Starting in mid-2008, ATLAS will observe the dramatic head-on collisions of pairs of protons at unprecedented energies. It will bring physics into new territory with new processes and particles that will change our understanding of energy and matter.



Learn particle physics basics at this



Learn more about ATLAS and the LHC at:



**Figure Caption:**

*A collision event viewed along the beamline. After the unseen protons collide these particles emerge. This is a bird's-eye view of the ATLAS detector. The size of the inner detector is greatly exaggerated, whereas the size of the muon chambers on the outside is greatly reduced.*





# HYbrid Pupil's Analysis Tool for Interactions in ATLAS

<http://hypatia.phy.bg.ac.yu/>

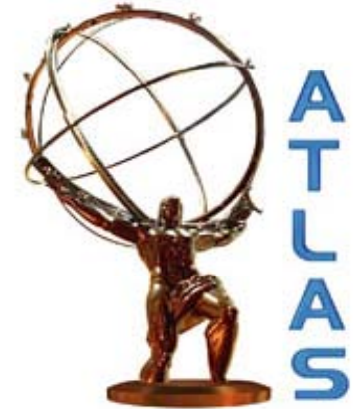
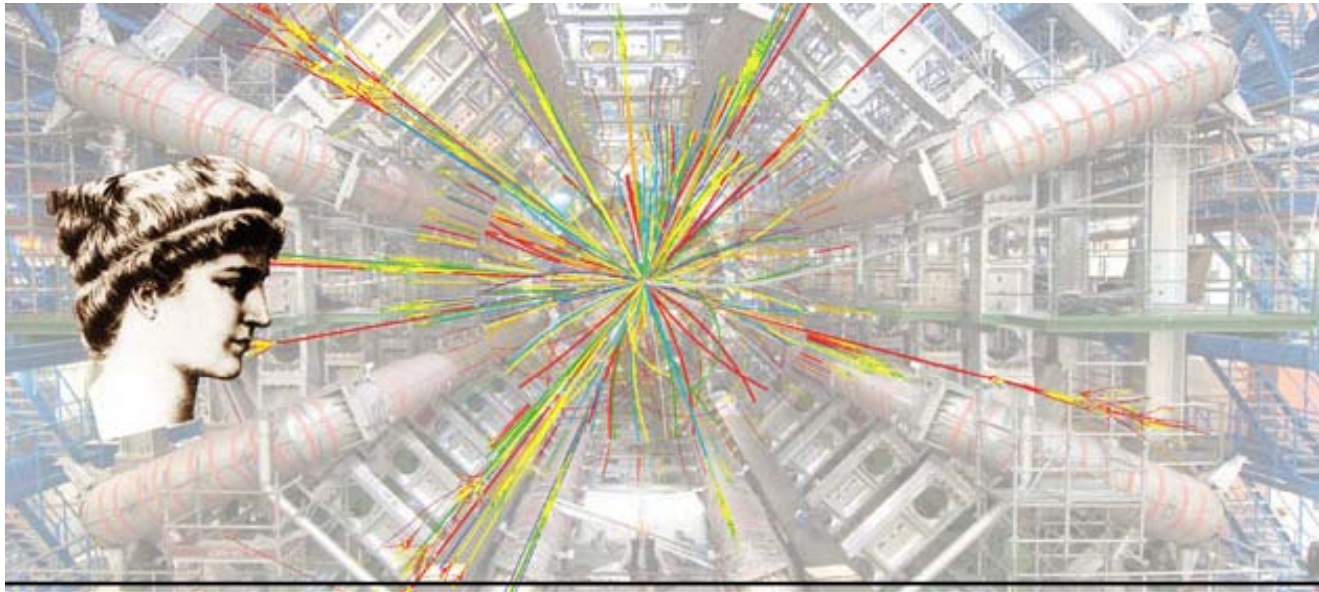
Soon to be linked from the ATLAS outreach page

C.Kourkoumelis (UoA)

D.Fassouliotis

D.Vudragovic

(Belgrade)



H Y P A T I A

HYbrid Pupil's Analysis Tool for Interactions in ATLAS

E. Johansson and M. Barnett, April 2008

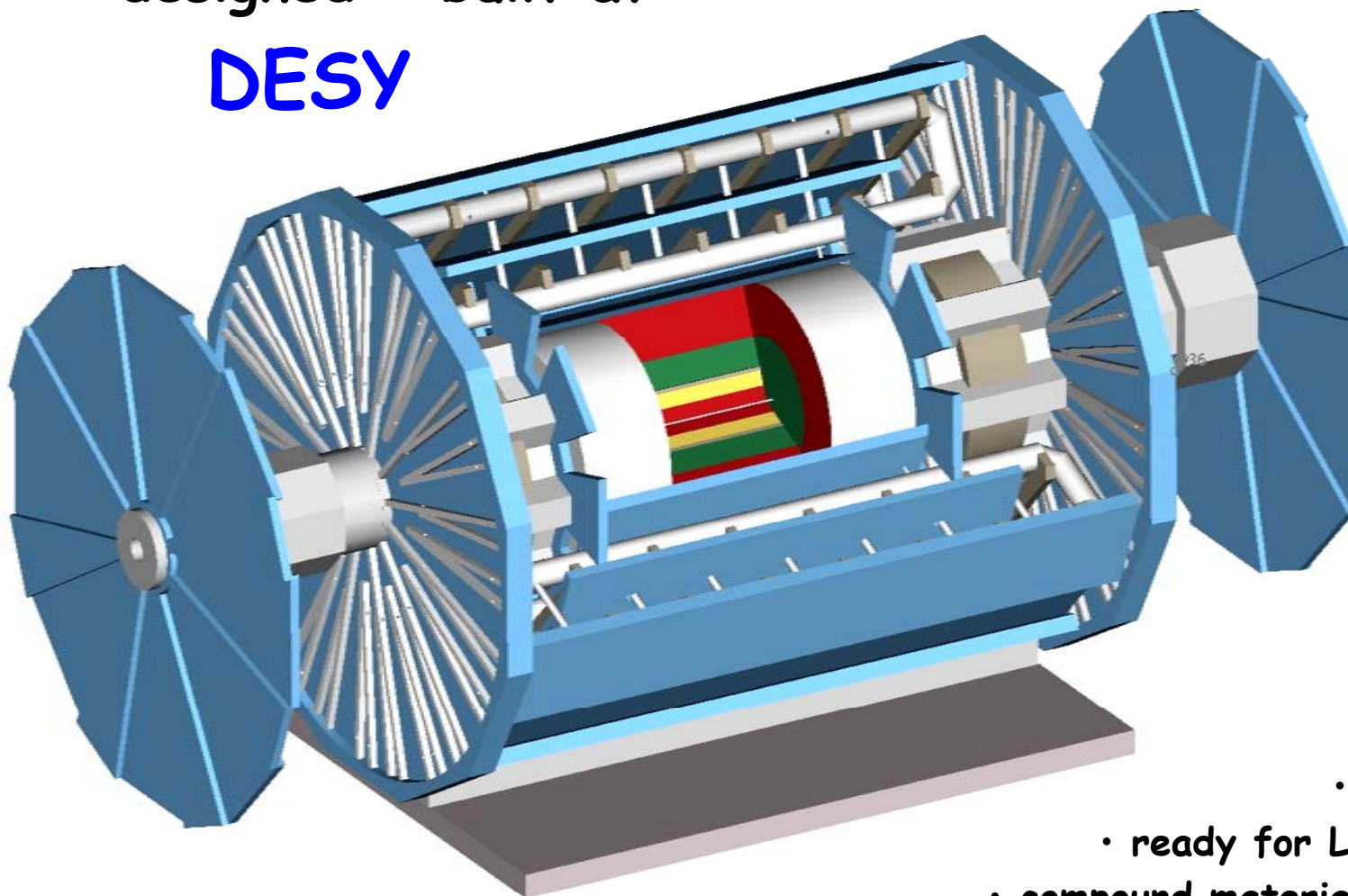
Erik Johansson at  
EPPOG in Prague



# ATLAS Model

designed + built at

**DESY**



- ~1/2 man year
- ready for LHC inauguration
- compound material - reduce mass
- CAD files (stp) to ATLAS + ESOF 2008

# ATLAS 1 m model

**Will be produced using lithography method**

**1 m long**

**Cost 4-5 keuro**

**Prototype ready this Summer.**

# CERN Open Day in ATLAS

- 1. ATLAS control room and two parallel presentations (Doris Burckhart)**
- 2. 3D film (polarised glasses)**
- 3. Visit to the ATLAS experiment**
- 4. The ATLAS tent**
- 5. 2200 plus 3500 visitors to the ATLAS cavern**



