



LHCb

ATLAS

CERN Meyrin

CERN Prévessin

SPS 7 km

PS 6.28 km

ALICE

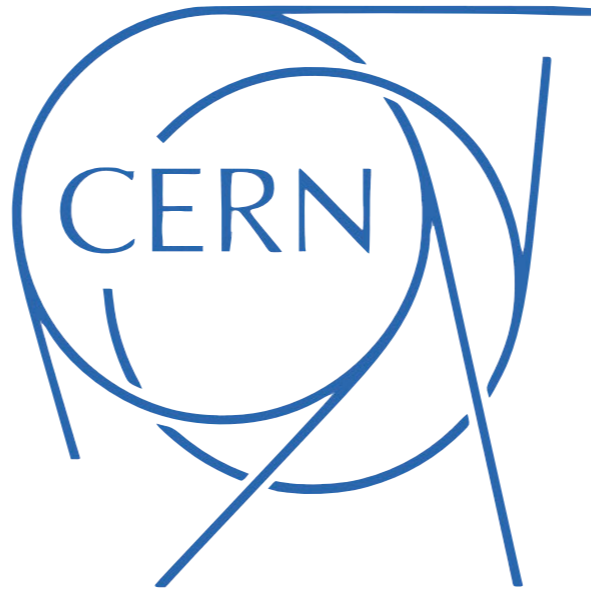
SUISSE
FRANCE

CMS

Ressources in Education

Konrad Jende, UK Teacher Programme 2014

LHC 27 km



Ressources in Education

Konrad Jende, UK Teacher Programme 2014

CERN Education



Education

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[Teacher Programmes](#) | [Teaching Resources](#) | [Visit CERN](#)



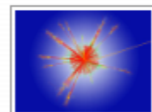
The CERN education website offers informations about teacher programmes and educational resources for schools.

[Teacher Programmes](#)



CERN offers courses for physics teachers in English or in your mother tongue, lasting between 3 days and 3 weeks. You will experience the atmosphere of frontier research at the LHC, meet with scientists and teaching colleagues, and find new ideas on bringing modern physics into the classroom.

[Teaching Resources](#)



Find presentations, recorded lectures, teaching materials, movies, animations, games, posters, photos, games and ideas for practical activities in the classroom. All this material is available for free when used for educational purposes.

[Visit CERN](#)



Take a tour of our laboratory, either from your classroom or by [coming to CERN](#).



Forthcoming events

7 - 12 Sep, Italian Teachers Programme

17 - 21 Sep, Dutch Teachers Programme

18 - 19 Sep, Danish Teachers Programme

30 Sep - 3 Oct, UK Teachers Programme

5 - 11 Oct, Bulgarian Engineering Teachers Programme

12 - 17 Oct, German Teachers Programme

12 - 17 Oct, Italian Teachers Programme

Archive of all programmes



News

CERN - "Beam line for schools" - Competition 2014

NEW

Cosmic Ray Teaching Module [In German]

Ressource 1



The screenshot shows the CERN Education website. At the top left is the CERN logo and the word "Education". To the right is a navigation menu with "Home | Contact us | CERN Home", a search bar with a "Search" button, and radio buttons for "this site" (selected) and "All CERN". Below the navigation is a horizontal menu with "Teacher Programmes | Teaching Resources | Visit CERN". A large photo of three students wearing headsets is centered below the menu. Underneath the photo, there are two columns of content. The left column is titled "Teaching Materials" and lists several items, some with "NEW" tags. The right column is titled "Teaching Resources" and contains a paragraph of text. At the bottom of the page, there is a copyright notice: "Copyright CERN 2007 - Web Communications, DSU-CO".

Education

Home | Contact us | CERN Home
Search
 this site All CERN

Teacher Programmes | Teaching Resources | Visit CERN



Teaching Materials

- Cosmic Ray Teaching Module [In German] **NEW**
- The Amazing World of Atoms **NEW**
- Antimatter Teaching Module **NEW**
- From the Big Bang to the LHC **NEW**
- CERN
- Particle Physics
- Cosmology
- Principles of Experimental Physics
- Introduction to Accelerators
- Applications
- Multimedia material

Teaching Resources

The Teaching Materials presented here will allow teachers to introduce topics in modern physics to middle and high school students, and to do so in interesting and novel ways. In addition to the new Antimatter Teaching Module (a series of lesson plans, background materials and extension topics on antimatter, aimed at students 14-15 years), these materials include presentations, recorded lectures, teaching materials, movies, animations, games, posters, photos, games and ideas for practical activities in the classroom. All this material is available for free when used for educational purposes.

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Ressource 2



High School Teachers at CERN



WWW.CERN.CH [TEACHING MATERIALS](#) [HST PROGRAMMES](#)
[VISITING CERN](#) [LINKS & BOOKS](#) **HOME**

The main goal of this site is to document the work done by the participants of the programme and to collect material useful for classroom activities and public education in physics, which is then available for everyone.

NEWS

Applications for HST2014 are now being accepted

FOR MORE INFORMATION PLEASE FOLLOW THE LINK BELOW

HST TEACHING MATERIALS

- [Accelerators](#)
- [Bubble chambers](#)
- [Build a Cloud Chamber](#)
- [Feynman diagrams](#)
- [Detectors](#)
- [Experiments](#)
- [About CERN and HEP](#)
- [General Physics](#)
- [Syllabus review](#)

VISITING CERN

- [Microcosm](#)
- [CERN websites](#)



The First Z Particle 30th April 1983 (CERN Photo)

PHYSICS LINKS

- [General Physics](#)
- [Particle Physics](#)
- [Research Organizations](#)
- [Books and Journals](#)
- [CERN's Educational Page](#)

HST PROGRAMMES

- [1998](#), [1999](#), [2000](#), [2001](#), [2002](#), [2003](#), [2004](#), [2005](#), [2006](#), [2007](#), [2008](#), [2009](#), [2010](#), [2011](#), [2012](#), [2013](#), [2014](#)

SITEMAP

WORKING AREA

Ressource 3

The screenshot shows the CERN 60 Multimedia website. At the top left is the CERN logo with the text "YEARS/ANS CERN". To the right are language options "EN" and "FR", and a navigation menu with "NEWS", "EVENTS", "MULTIMEDIA", and "MENU". A large banner features a folder icon and the text "Multimedia Discover all the photos and videos of the CERN60 celebrations and download your posters, wallpaper and much more!". Below the banner, a breadcrumb trail reads "CERN 60 > Multimedia > CERN exhibitions content". A sidebar on the left lists "CERN60 RESOURCES" and "CERN EXHIBITION CONTENTS" with sub-items: Overview, Physics, LHC Accelerators, Experiments, Computing, Knowledge Transfer, and History. The main content area is titled "CERN exhibitions content" and contains two cards. The "Overview" card shows a satellite map of CERN with labels for CMS, LHC (Large Hadron Collider), ALICE, ATLAS, and LHC2, and a "VIEW CONTENT >" button. The "Physics" card displays a particle physics diagram with labels for Quarks (u, c, t, d, s, b), Leptons (e, μ , τ), Higgs boson, and various bosons (W, Z, γ), and a "VIEW CONTENT >" button.

Ressource 4



International Particle Physics Outreach Group

[Login / Sign-up / FAQs](#)

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[HOME](#) > [RESOURCES](#)

Resources

Activities

- [Cart Demonstration](#)
- [Classroom Activity](#)
- [Facilitated Activity](#)
- [Presentation](#)
- [Game](#)
- [Display](#)

Programs & Events

- [Science Fair / Science Festival](#)
- [Science Camp](#)
- [Science Shows & Performances](#)
- [Symposium / Conference](#)
- [Classroom Outreach Program](#)
- [Multi-Media Contest](#)

Media

- [Audio / Podcast](#)
- [Film / Video](#)
- [Animation - real event](#)
- [Animation - simulated event](#)
- [Images](#)
 - [Photos](#)
 - [Illustrations](#)
 - [Event Displays \(static\)](#)
 - [Plots](#)
- [Computer game](#)
- [Non-game Interactives / Virtual Tours](#)
- [Website](#)

Learning Topics



- ▶ [Physics](#)
- ▶ [Technology](#)
- ▶ [International Collaboration](#)
- ▶ [Broader Impacts](#)

LATEST

FEATURED



Search by

Learning Topic

- Any -

Audience

- Any -

Item Type

- Any -

Availability

- Any -

Duration

- Any -

Language

- Any -

Key Words

GO

Resources in your language

[English](#) [French](#) [German](#)
[Italian](#) [Portuguese](#) [Spanish](#)

[more](#)

Filter by audience

6 to 9 years

Ressource 5

The screenshot shows the ATLAS Experiment website homepage. At the top, there is a navigation bar with links for Home, Info, Multimedia, Blogs, Links, Visit ATLAS, Contact, Collaboration Site, Store, Press, and Student/Teachers. The main content area is divided into several sections: 'ATLAS Briefings' with two histograms showing data points and fits; 'ATLAS News' featuring a portrait of a woman and a headline about a physicist winning a prize; 'ATLAS Run Status' with a table of luminosities; 'LHC shut down' announcement; 'ATLAS Science & Art' with links for Discovery Quest, ATLAS eTours, and Art in ATLAS; 'About ATLAS' with a section on 'Mapping the Secrets of the Universe'; and 'Higgs Multimedia Material' with a video player for 'The ATLAS Story'.

ATLAS EXPERIMENT

Home Info Multimedia Blogs Links Visit ATLAS Contact Collaboration Site Store Press Student/Teachers

News Live Science: First Glimpse of Higg_ Like 1.9k

ATLAS Briefings

ATLAS $\sqrt{s} = 7$ TeV $\int L dt = 36.1 \text{ fb}^{-1}$

ATLAS $\sqrt{s} = 8$ TeV $\int L dt = 36.1 \text{ fb}^{-1}$

ATLAS News

ATLAS Physicist Wins Young Scientist Prize

For her contribution toward the discovery of the Higgs boson, Kerstin Tackmann was awarded the Young Scientist Prize in Particle Physics 2014 by the International Union of Pure and Applied Physics. [Learn more here...](#)

ATLAS Run Status

Collision System	Proton-Proton	Proton-Lead	Lead-Lead
27.03 fb ⁻¹	29.85 nb ⁻¹	167.4 μb^{-1}	

LHC shut down

for upgrades. Restart April 2015. [More info, can be found here.](#)

ATLAS Science & Art

ATLAS and the Higgs

Finding the Higgs Boson is changing our understanding of the world. [Learn more.](#)

Discovery Quest ATLAS eTours Art in ATLAS

About ATLAS

Mapping the Secrets of the Universe

ATLAS is a particle physics experiment at the Large Hadron Collider at CERN that is searching for new discoveries in the head-on collisions of protons of extraordinarily high energy. ATLAS will learn about the basic forces that have shaped our Universe since the beginning of time and that will determine its fate. Among the possible unknowns are extra dimensions of space, unification of fundamental forces, and evidence for dark matter candidates in the Universe. Following the discovery of the Higgs boson, further data will allow in-depth investigation of the boson's properties and thereby of the origin of mass.

Higgs Multimedia Material

"The ATLAS Story". This film produced in July 2012 explains how fundamental research connects to society and what benefits working collaboratively may be generated in the future using ATLAS Collaboration as a case study. [More...](#)

The ATLAS Story

Impacts of its Science,

The screenshot shows the CMS Experiment website homepage. It features a search bar, navigation tabs for 'PUBLIC WEBSITE' and 'COLLABORATION WEBSITE', and a main menu with links for CMS People, Detector, Physics, Education and Outreach, Jobs, and Contact CMS. The central focus is a large banner for the 'Observation of a New Particle with a Mass of 125 GeV' dated 4 July 2012, accompanied by a 3D visualization of a particle collision. To the right, there is a sidebar with 'Introducing CMS' (listing the Nobel Prize and Higgs discovery), 'CMS Live', 'CMS Links', and 'Multimedia'. Below the banner, there are sections for 'General News' (CHIPP Prize 2014 to Marco Peruzzi) and 'Physics News' (Recent results in the search for supersymmetry). The bottom right corner contains 'Photographs' and 'Images of collisions'.

Compact Muon Solenoid experiment at CERN's LHC

Search

PUBLIC WEBSITE COLLABORATION WEBSITE

CMS People Detector Physics Education and Outreach Jobs Contact CMS Help

CERN > CMS Experiment

Observation of a New Particle with a Mass of 125 GeV

CMS Experiment, CERN 4 July 2012

Introducing CMS

- Englert and Higgs get the Nobel
- Observation of a New Particle with a Mass of 125 GeV
- Physics Results
- CMS Detector
- About CMS

CMS Live

CMS Links

Multimedia

Physics Results

Photographs

Images of collisions

General News

CHIPP Prize 2014 to Marco Peruzzi

2014-07-30, by Paris Sphicas

Physics News

Recent results in the search for supersymmetry

2014-07-24, by Paris Sphicas

CMS closes major chapter of Higgs measurements

2014-07-03, by Tiziano Camporesi

Any questions?



Konrad Jende - konrad.jende@cern.ch

33-R-010 +41 76 487 0246