ATLAS and CMS Virtual Visits: Bringing Cutting Edge Science into the Classroom and Beyond

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On behalf of ATLAS and CMS Outreach Teams

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Virtual Visits are **live conversations**, in the participants’ preferred language, that **connect** the public, usually **teachers and students**, with **scientists** at laboratories e.g. the ATLAS and CMS Experiments at CERN.
Aims at **inspiring young people** to ask questions and get involved in science.

A very young audience from **Poland** asking questions during a CMS Virtual Visit.

Guide answering questions from the ATLAS Control Room.
Participants visit experimental facilities remotely and see even more than physical visitors.
Everyone in the world is a potential virtual visitor, not only schools!

Evolution of ATLAS Virtual Visits per type

Number of visits

Period

- 2010
- 2010-2011
- 2010-2012
- 2010-2013
- 2010-2014
- 2010-2015

Conference  Event  School
Participants join from the farthest corners of the world

ATLAS Virtual Visits: Nov 2010 - July 2015
Remote locations need:
✓ Computer
✓ Internet
✓ Video projector/TV screen/...
✓ Microphone
✓ Vidyo/Hangouts/Skype... (test compulsory)

Teams that make it happen:
✓ Guides / You! 😊
  (native language of the visitors)
✓ Coordinator (booking, preparation process, etc.)
✓ Technical Operator(s)

A visit projected on the wall of a classroom (remote location)

CMS mobile equipment
Empowers the **education process** and could be reinforced by **preparation and follow-up** to maximize success.

**Virtual Visit consists of:**
- Video conference
- Live webcast for parents and other passive audience
- Video recording on a permanent site for future reference

* List of resources for Preparation and Follow up can be found in the Backup slides.
Partnerships help to reach out to educational communities in Europe and beyond

Partnership with Open Discovery Space Network enabled to reach numerous schools with one connection AND connect with other research infrastructures (e.g. IceCube) to perform large-scale national and international Virtual Visits.

CMS/ATLAS/IceCube Virtual Visit, Oct. 2014: 5 schools from Bulgaria, Greece, Israel, Romania, Serbia 380 students
Feedback helps us to understand what our participants value the most.

“It’s great to work with our colleagues at CERN to show students two different cutting edge detectors, each with a different approach to exploring the universe.”

Jim Madsen

Associate Director for Education and Outreach at the Wisconsin IceCube Particle Astrophysics Centre

Local organiser of a joint ATLAS/CMS Virtual Visit
Feedback helps us to understand what our participants value the most.

“What surprised me today is the fact that I didn’t know the people were trying to find the answer about how the universe was made. I have always thought about that.”

11-year-old student from Los Angeles, US
Participant of a CMS Virtual Visit
Feedback helps us to understand what our participants value the most.

“This way of gaining knowledge is way more attractive and interesting, because it let us gather information directly from CERN workers on how one of the most important laboratories in Europe works.”

13-year-old student from Poland
Participant of a CMS Virtual Visit
Feedback helps us to understand what our participants value the most.

Dear Colleagues,

We would like to express our great thanks to CERN organization especially CMS and ATLAS experiments for the succeeded scientific event “Virtual Visit to CERN” on 27 October 2014 in collaboration with Faculty of Science, Mansoura University, Egypt.

Thank you in advance
All of our best regards,

EL-Bass

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Coordinator:
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M. Ezzat Kassr
M. Kassr
Really **simple for YOU** to get involved!

...as a coordinator

- Bring a Virtual Visit to your local school or your own high school
- Talk to your national [IPPOG representative](#) to see how they can help you in coordination of the Virtual Visits for many schools from your country
- Giving a public/school talk? Work with us to organise a Virtual Visit as a follow-up!

...as a guide

- Based at CERN? Join our team of guides!
Practical information

ATLAS VIRTUAL VISITS
- Website: http://cern.ch/atlas-virtual-visit
- Contact: atlas.public@cern.ch
- Photos: http://cern.ch/go/B7rt

CMS VIRTUAL VISITS
- Website: http://cms.web.cern.ch/content/virtual-visits
- Contact: cms-otreach@cern.ch
- Photos: http://cern.ch/go/lv8V
ATLAS Virtual Visits Facts

- Best online event / Digital Communication Award 2012
- Launched in 2010
- 40 countries reached
- ~80% of the requests come from ATLAS institutes
- 227 visits since 2010
CMS Virtual Visits Facts

Mobile equipment / access to experimental facilities

21 countries reached

Officially launched
Sept. 2014 / First trial visit
Nov. 2011

80% of participants are students

More than 7500 participants

66 visits within 10 months
Related Education & Outreach

These resources can help with “Preparations” and “Follow up” of the Virtual Visit:

- Masterclasses
- CERN Open Data Portal
- Classroom lecture/talk by a researcher
- ...
## Acknowledgements

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