

ATLAS Virtual Visits – Bringing the world to our detector

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Thanks to the Virtual Visits service, the ATLAS Collaboration has been reaching classrooms and other public targets worldwide since 2010. Schools and universities, pupils, undergraduate and graduate students, science and non-science classes have the opportunity to visit CERN area and interact with scientists, without travelling to Geneva. This popular service uses a combination of video conferencing, webcasts, and video recording to communicate with remote audiences. In these proceedings we will present a summary of the ATLAS Virtual Visit service, including the new system installed in the ATLAS Visitor Centre, which will be important during Run 3. In addition, we will show the programme reach over the last year.

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¹On behalf of the ATLAS Collaboration.



1. Introduction

The ATLAS Virtual Visits system was born in 2010, in order to give the opportunity to groups from all over the world to explore CERN and the experiment through a live video link. This service is popular and uses a combination of video conferencing, webcasts, and video recording to communicate with remote audiences.

People can attend two types of virtual visits: group virtual visits, addressed to big groups, like school and university groups, and open virtual visits, addressed to the general public, even online on social networks.

During a Virtual Visit, guides usually introduce themselves and their involvement in the experiments at LHC. Then they provide a short overview of CERN, LHC and ATLAS experiment [1], pointing out discoveries and recent results. The last part of the visit is a discussion between participants and guides, in which students and interested people can ask questions.

2. Group Virtual Visits

A group Virtual Visit can be booked by any group: e.g., schools (science and non-science classes) and universities (undergraduate and graduate students). Interested groups can schedule a Virtual Visit online on the ATLAS experiment web site [2], expressing their preferences in time and languages.

In Table 1 the number of visits, countries and languages are reported for 2022.

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|-------------------------|----|
| Number of visits | 66 |
| Number of countries | 26 |
| Number of new countries | 3 |
| Number of languages | 6 |

Table 1: Data collected until 24 June 2022

In Figure 1 the 26 visitor countries in 2022 are shown in a world map and in a chart table. In 2022 many countries all over the world booked visits, among which Spain was the country which requested the highest number of visits, followed by Switzerland, Pakistan, Germany and USA. This year there were three new visitor countries: Ghana, Swaziland and Taiwan. Visits took place in 6 different languages.

The visit is managed by scientists working in the experiment, which are trained in the general knowledge of high energy physics at the LHC in order to explain these concepts to a universal audience.

The video conferences are provided by different platforms, namely ZOOM or Skype. The primary location where the visits take place is the ATLAS Visitor Centre next to the ATLAS Control Room. There are two pre-installed HD cameras: one that focuses on the guides and one that provides a panoramic view inside ATLAS Control Room.

When the cavern is open, guides can go inside the ATLAS cavern and show the audience the experiment. During Run 3, while the cavern is closed, visits will take place in the new ATLAS

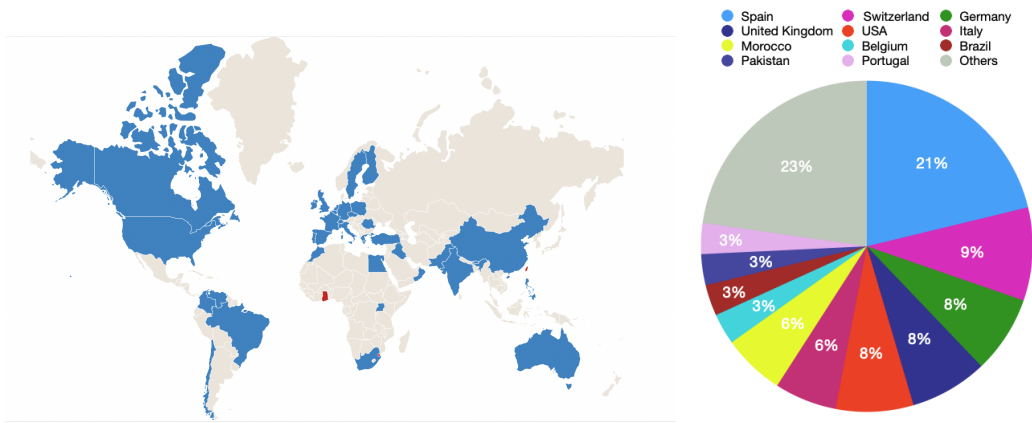


Figure 1: (Left) The 26 countries which booked a group Virtual Visit in 2022. In blue the maps of the countries, in red are the new visitors of this year: Ghana, Swaziland and Taiwan. (Right) the chart of the percentage of countries which booked visits in 2022.



Figure 2: (Left) Sue Cheatham and Steven Goldfarb host an ATLAS Virtual Visit from Holy Comforter Episcopal School, Tallahassee, Florida, USA [4]. (Right) ATLAS new visitor centre [5]

Visitor Centre [3]. Among several updates, there is a dedicated virtual visit area that is separated from the rest, with improved equipment, connectivity and lighting for visit hosts. It allows to have virtual and in-person visits at the same time. A picture of the new ATLAS Visitor Centre is shown in Figure 2.

3. Open Virtual Visits

Open Virtual Visits are also scheduled periodically and can be joined by individuals or small groups. This kind of visit is organized monthly. The last virtual visit before Run 3 was on 23rd of March, 2022. People can find time slots on the website and select the date, time and language that best fit. Guides can also organize them through social networks. When the cavern is open, guides give virtual tours of ATLAS, streaming on TikTok and YouTube. These events are also public to every person connected on these platforms and can be watched again, even after the end of the visit.

References

- [1] The ATLAS Collaboration, *The ATLAS Experiment at the CERN Large Hadron Collider*, **JINST 3** (2008) S08003
- [2] [ATLAS Virtual Visits web site](#)
- [3] The ATLAS Collaboration, S. Mehlhase, *A new ATLAS Visitor Centre*, (2022), [ATL-OREACH-SLIDE-2021-760](#)
- [4] [ATLAS-PHOTO-2017-023-8](#)
- [5] [CERN-PHOTO-202108-106-4](#)