



ATLAS On the Air!

Measuring the Success of the ATLAS Virtual Visit Programme





What are we talking about?

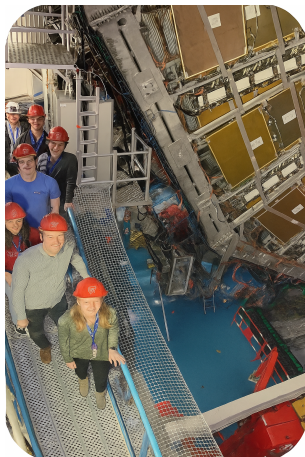


ATLAS experiment at the LHC point-1 is the most visited experiment at CERN



- Public Visits to ATLAS Visitor Centre (AVC) ([link](#))
- Private Visits to AVC ([link](#))
 - Weekdays: 8:00–10:00, 14:00–15:00, 17:00–19:00
- Underground Visits to the ATLAS Cavern ([link](#))
 - Weekdays: 8:00–18:00
 - Possible only during shutdown
- Virtual Visits (VVs) in AVC or Underground ([link](#))
 - Virtual Visits in AVC available all year around
 - Underground Virtual Visits as above only during shutdown

We receive a very high volume of visits of all kinds

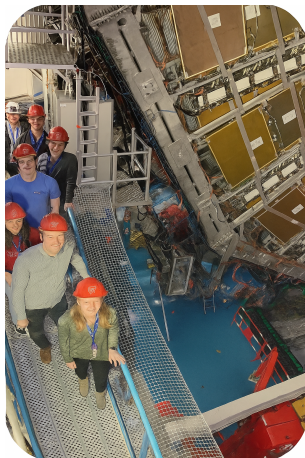


Year	AVC Visits	AVC Virtual	Underground	Underground Virtual
2022	1514	55	~100	66
2023	2404	44	280	24



Visit Statistics – 2022 & 2023 examples

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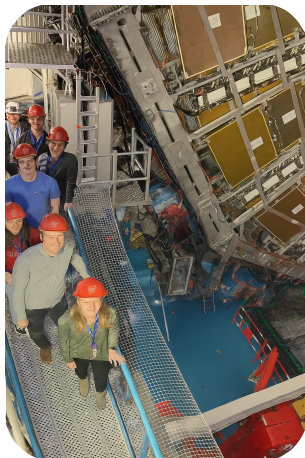
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→ ATLAS Visitor Centre and ATLAS Detector are the most visited sites at CERN!

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- ATLAS Visitor Centre and ATLAS Detector are the most visited sites at CERN!
- For example, in 2022 there were 31,700 visitors in AVC, while in 2023 we had 50,500 visitors!

ATLAS – VIRTUAL – visits in a nutshell



Virtual visits moved to the ATLAS visitor center.
New video system installed.

2010

Launch of virtual visits from the ATLAS control room.

2014

2019

Launch of virtual visits from the ATLAS cavern.

2025

Upgraded video system in the ATLAS visitor center.

2024



ATLAS – VIRTUAL – visits in a nutshell



Virtual visits moved to the ATLAS visitor center.
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2010

2014

2019

2024

2025

Launch of virtual visits from the ATLAS control room.

Launch of virtual visits from the ATLAS cavern.



- **Space:**

- From the AVC next to the ATLAS Control Room (ACR) or the ATLAS Cavern when accessible

- **Audiences:**

- Schools, universities, science festivals and politicians
- Open visits targeting all audiences are also organized regularly

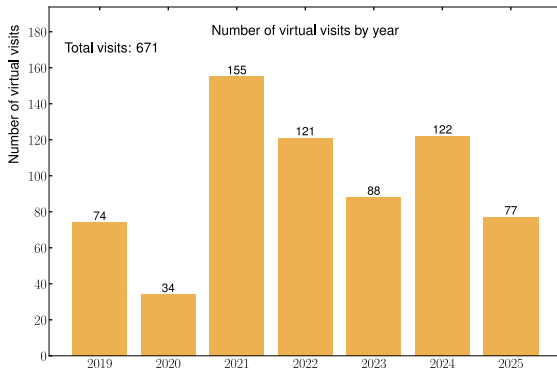
- **Theme:**

- Starts introducing CERN, ATLAS and particle physics
- Extended discussion between the hosts and the audience
- Done using Zoom, additional engagement through other social media platforms



Statistics



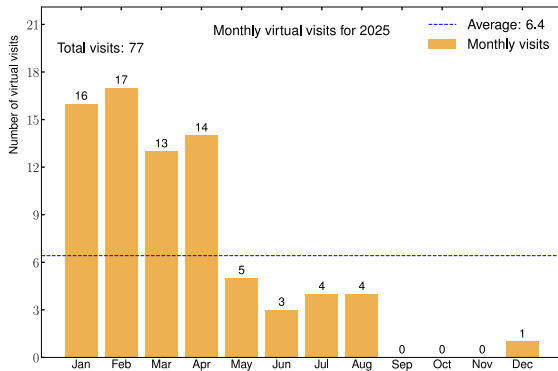
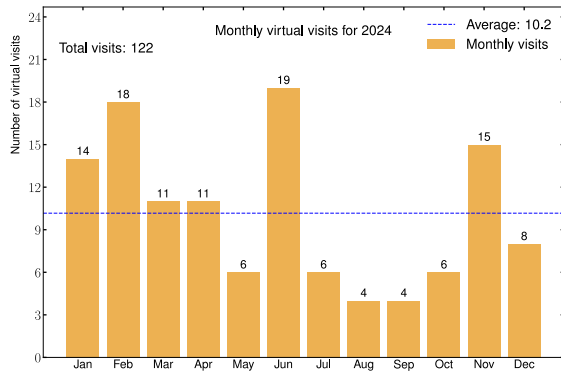


2021 & 2024:

the first and second most active years since the start of the programme!

- We have hosted nearly 100 visits annually
- Almost 700 visits over the past 6 years!

→ 2025 is still evolving, stay tuned!

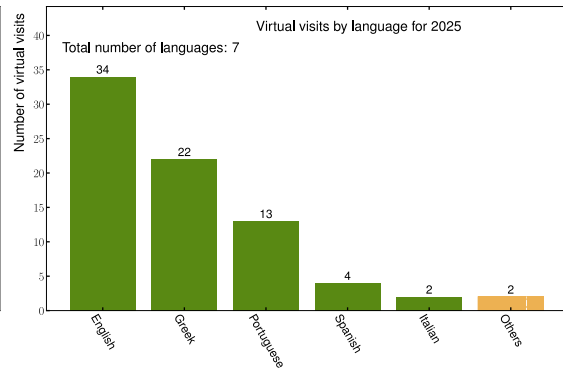
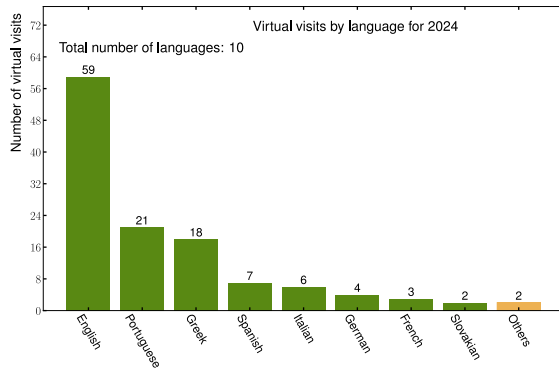


The best month is June 2024, while demand is also high at the start and end of the year due to the possibility of going underground!

- 48 visits from the Cavern
- 6 & 1 visits streamed on YouTube & TikTok for general audience
- 1 joint visit with CMS experiment

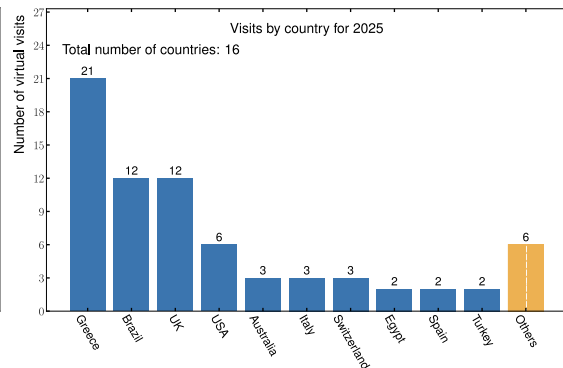
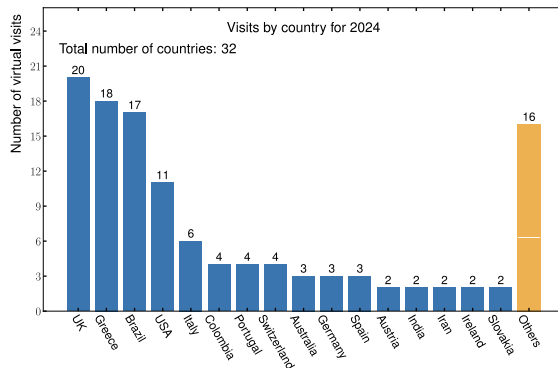
→ 2025 is still evolving, stay tuned!

2024/2025 – visits language



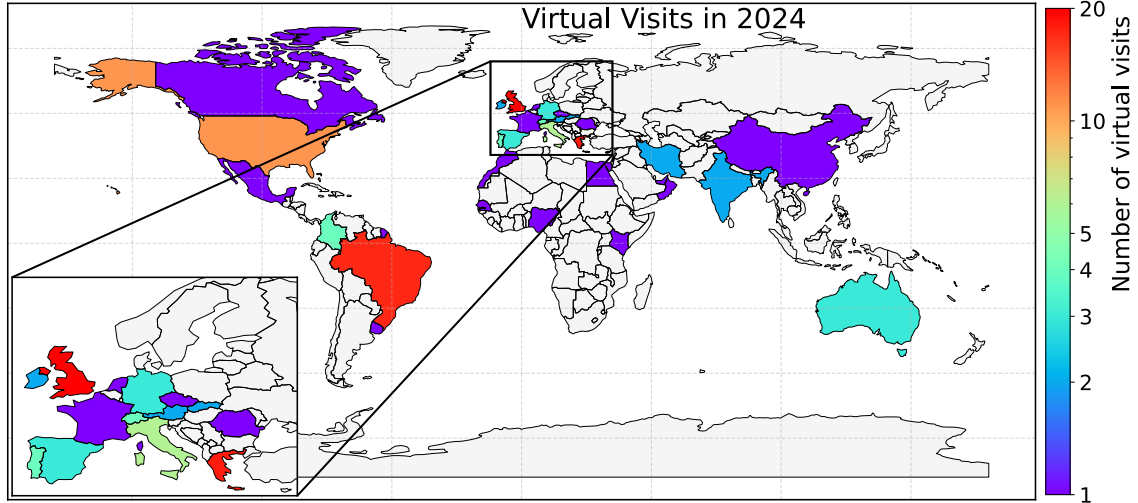
- English is the most used language
- Greek and Portuguese are the second and third requested languages
- Guides in up to 10 languages in the last years

→ 2025 is still evolving, stay tuned!



- Greece, Brazil and the UK shows the highest participation in the last years
- In 2024 VVs were offered to groups from 32 countries

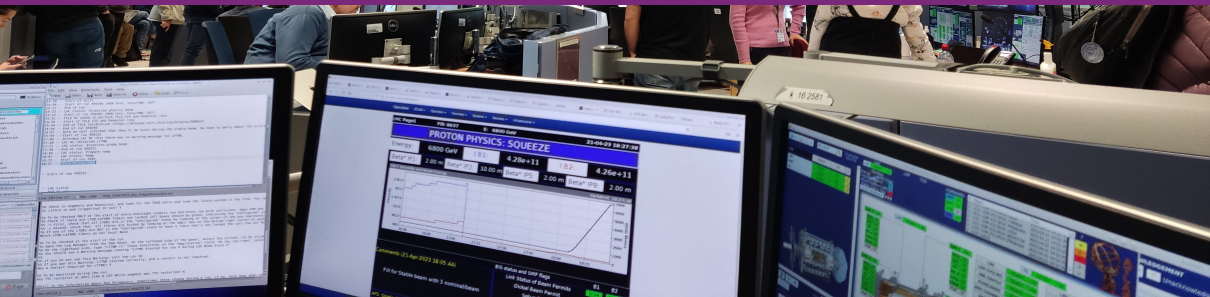
→ 2025 is still evolving, stay tuned!



In 2024, the VVs welcomed participants from all around the globe!



Recognition & practical info



Virtual Visits featured in 3 major international conferences in 2024!

The program provides participants with communication training and the opportunity to increase their visibility!

- Poster at the LHCP 2024, Boston [link](#)
- Poster at ICHEP 2024, Prague [link](#)
- Talk at CHEP 2024, Krakow [link](#)
- Poster at LHCP 2025, Taipei [link](#)

→ 2025: a talk right here today!




Engaging the World - The Popular ATLAS Detector Visit and Virtual Visit Programmes

Silke Mielke, on behalf of the ATLAS Collaboration¹
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 Laboratory for High Energy Physics (LHEP),
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The ATLAS Collaboration offers a wide range of popular outreach programs to engage the ATLAS detector at CERN to the public or through virtual visits. The virtual visit program is designed to provide a guided tour to local audiences. In the same time, remote video-conferencing throughout the year, the ATLAS Virtual Visit Center experimental site at CERN, where public introduces thousands of local physics research. The virtual visit program is designed to provide an interactive view of the ATLAS Control Room and the experiment popular not only for classrooms and groups around the world, remote visitors, but also for the public, who have a chance to hear their scientists' research, and the value of international collaboration. We present the developments and current efforts to make them available to a broader audience.

13th Large Hadron Collider Physics Conference (LHCPP2024)
 1-7 July 2024
 Rome, Italy

¹Speaker
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Engaging the World - The ATLAS Detector Visit and Virtual Visit Programmes

Muhammad Albroob^{1,*}
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 E-mail: muhammad.albroob@cern.ch

High Energy Physics has a special appeal for public engagement a long time for the scientific has been proactive in providing opportunities physics research. With over 1000 members, we the gap between science and society, recognized collaboration offers many outreach programs. ATLAS Virtual Visit and the recently accessible to interact with researchers. ATLAS Virtual Visit experiment and its control room, while Virtual reach global audiences who cannot visit in person. In these proceedings, we outline how both the ATLAS experiment [1] at the LHC and detector.

ATLAS International Conference on High Energy
 18-24 July 2024
 Prague, Czech Republic

¹Speaker
 On behalf of the ATLAS Collaboration.

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Recent Updates to the Popular ATLAS Virtual Visit Programme

The Phys^{1,*}, Muhammad Albroob^{2,}, and Steven Goldfarb^{3,***}**
¹University of Melbourne
²University of Warwick

Abstract.
 Virtual Visits have been an integral component of the ATLAS Education and Outreach programme since their inception in 2010. Over the years, collaboration members have hosted visits for tens of thousands of visitors located all over the globe. In 2024 alone, there have already been 79 visits through the month of May. Visitors in classrooms, festivals, events or even at home have a unique opportunity to engage with scientists located underground in the ATLAS experimental cavern or in front of the control room to learn about the goals and achievements of the collaboration. As part of the renovation of the ATLAS Visitor Centre at LHC Point 1, a new installation was constructed to facilitate Virtual Visits during the running of LHC. We present the overall programme and the latest installation and discuss recent initiatives to expand our reach, including Open Visits on Zoom, Facebook, YouTube and TikTok Live.

1 Motivation

Public engagement is a key priority for the scientific community. The virtual visit programme of the ATLAS Experiment at CERN uses the full potential of video conferencing to reach global audiences who cannot visit in person [1]. It offers the public a chance to explore cutting-edge particle physics research while helping to bridge the gap between science and society, highlighting the importance of this connection [2]. The programme is designed to bring the excitement of scientific discovery into classrooms, providing students of all ages, backgrounds, and education levels with virtual resources for particle physics [3].

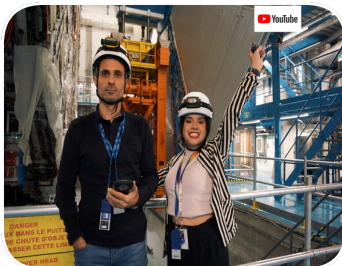
2 Introduction

The ATLAS Experiment's virtual visit programme, launched in 2010, has been running for 15 years. These virtual visits are designed to be interactive, engaging, and dynamic [4]. They primarily use video conferencing platforms, particularly Zoom, for group visits and social

^{*}email: the.phys@unimelb.edu.au
^{**}email: muhammad.albroob@cern.ch
^{***}email: steven.goldfarb@cern.ch
 On behalf of the ATLAS Collaboration

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Different type of Virtual Visits streamed on YouTube & TikTok ([link](#))




- **Some remarks:**

- Languages: Greek, Spanish, Portuguese, German, French
- When: Dec 2024 to March 2025
- Views: Between 500 and 2000 per video (live)
- Platforms: YouTube and TikTok

- **Some numbers:**

- Around 1k view for each video
- More than 5k view for one English VVs!



Visite Virtuelle en Direct de l'Expérience
ATLAS au CERN (en français )




Ζωντανή Διαδικτυακή Επίσκεψη στο
ATLAS μέσω Livestream



Visita virtual en directo desde el
experimento ATLAS en el CERN (en...



Visita virtual em direto da Experiência
ATLAS no CERN (em português )

Guide Availability and Training

Guide Availability

- We offer continuous training
- We have a large pool of people that can give training
- Any member of CERN can be an ATLAS VV guide

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Two Types of Trainings

- **Simple Training:** Virtual Visits from AVC
- **Longer Training:** Virtual Visits from from the cavern
(safety courses, emergency procedures, underground briefing, etc)

More than thirty people each years participate in ATLAS Virtual Visits!

Groups with a minimum of 10 participants can sign up for a visit through an online form: [link](#)

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ABOUTDISCOVERRESOURCESUPDATESSEARCH
DetectorPhysicsCollaborationVisitLong Shutdown 2

Your name *

Susy Searcher

Your email *

susy.searcher@smartschool.edu

Your phone number

+41 78 123 45 67

Preferred Visit date & time (CERN Time, Geneva, Switzerland; for underground visits only weekdays between 7am and 6pm) *

dd/mm/yyyy

⌵

⌵

⌵

Visit title (e.g. name of school) *

Rock 'n Roll High School Science Class

Visitor location (city, town, ...) *

Sunnyvale

Visitor country *

- Select -

Preferred language for the Visit *

- Select -

Visit context *

- Select -

Visit description *

Please provide text describing the event that we can publish on the website. Whatever you put here will be publicly visible! Thank you.

Visiting group size (10 or greater) *

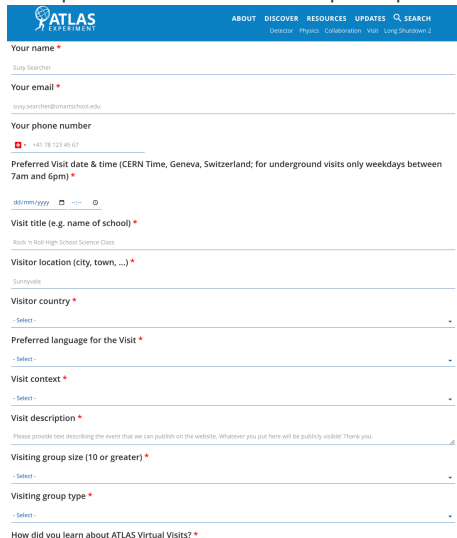
- Select -

Visiting group type *

- Select -

How did you learn about ATLAS Virtual Visits? *

Groups with a minimum of 10 participants can sign up for a visit through an online form: [link](#)




The screenshot shows the ATLAS EXPERIMENT website header with navigation links: ABOUT, DISCOVER, RESOURCES, UPDATES, and SEARCH. Below the header is the booking form with the following fields:

- Your name ***: Text input with placeholder "Susy Searcher".
- Your email ***: Text input with placeholder "susy.searcher@smartschool.edu".
- Your phone number**: Text input with placeholder "+41 78 123 45 67".
- Preferred Visit date & time (CERN Time, Geneva, Switzerland; for underground visits only weekdays between 7am and 6pm) ***: Date and time picker.
- Visit title (e.g. name of school) ***: Text input with placeholder "Rock 'n Roll High School Science Class".
- Visitor location (city, town, ...) ***: Text input with placeholder "Sunnyvale".
- Visitor country ***: Dropdown menu with placeholder "- Select -".
- Preferred language for the Visit ***: Dropdown menu with placeholder "- Select -".
- Visit context ***: Dropdown menu with placeholder "- Select -".
- Visit description ***: Text area with placeholder "Please provide text describing the event that we can publish on the website. Whatever you put here will be publicly visible! Thank you."
- Visiting group size (10 or greater) ***: Dropdown menu with placeholder "- Select -".
- Visiting group type ***: Dropdown menu with placeholder "- Select -".
- How did you learn about ATLAS Virtual Visits? ***: Text input.

- They are matched with guides who speak their language
- Each visit is hosted in a dedicated Zoom room
- A short publishable paragraph about the events to be published on the ATLAS webpage!

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Visiting group type *

- Select -

How did you learn about ATLAS Virtual Visits? *

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Visit Title: With Science beyond borders: IUT meets ATLAS @ CERN

Open Visit: No

Visit Date & Time (CERN): Mon, 24 Feb 2025, 11:30

Visitor Location: Tehran

Visitor Country: Iran

Visitor Continent: Asia

Visit Description:

We aim to engage undergraduates in cutting-edge science and technology. Since many of them do not have the opportunity to experience these fields firsthand, a virtual visit can be truly inspiring.

Visiting Group Type: University Students

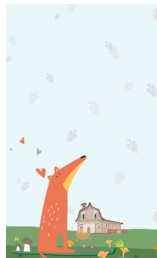
Visit Language: English

Conclusions & prospects



Beyond Expectations: The Greek Wave of Interest

"ATLAS, a playground for scientists"



Μια Εικονική Επίσκεψη στο CERN: Ένας "Παιδότοπος" για Επιστήμονες!



Τη Δευτέρα 17 Φεβρουαρίου, οι μαθητές μας είχαν την ευκαιρία να επισκεφθούν εικονικά έναν από τους πιο συναρπαστικούς επιστημονικούς χώρους στον κόσμο: τις υπόγειες εγκαταστάσεις του πειράματος ATLAS στον επιταχυντή LHC του CERN!

Μέσω ζωντανής σύνδεσης Zoom, περιηγήσαμε στους χώρους όπου διεξάγονται πειράματα που εξερευνούν τα θεμελιώδη συστατικά του σύμπαντος. Τα παιδιά είδαν από κοντά τα εντυπωσιακά μηχανήματα, τα εξελιγμένα εργατήρια και τις τεράστιες υποδομές που κάνουν δυνατή αυτή την πρωτοποριακή έρευνα.

Κατά τη διάρκεια της ξενάγησης, τα παιδιά είχαν την ευκαιρία να κάνουν ερωτήσεις στον επιστήμονα που μας καθοδηγούσε. Μια από τις πιο χαρακτηριστικές στιγμές ήταν όταν ένα παιδί παρατήρησε ότι "το CERN μοιάζει με παιδότοπος για επιστήμονες". Το σχόλιο ενθουσίασε τον ξενάγο μας, ο οποίος συμφώνησε χαμογελώντας, εξηγώντας μας, όσοι εργαζόμαστε εκεί, πραγματικά απολαμβάνουμε αυτό που κάνουμε, όταν να βρίσκονται σε έναν χώρο γεμάτο επιστημονικά "παιχνίδια".

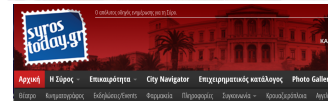


- Started as VVs requested from Greek schools during shutdown 2023-2024
 - Engaged 430 schools and 13000 participants
 - Participants expressed interest in annual continuation!
- Annual continuation** with surge in applications from diverse groups
 - Kindergartens, primary schools
 - special education institutions, Retired educators
 - Schools of Second Chance in Detention Centers (SSCDC)
 - Last year: reached 640 schools and 25000 participants!
- Program adapted to accommodate varied audiences!**
Trying to give equal opportunity to everyone!

ATLAS On the Air! Measuring the Success of the ATLAS Virtual Visit

Διαδραστική επίσκεψη του Λυκείου Λυγουριού στο CERN στην Ελβετία

ΑΡΓΟΓΚΕΙΣ ΕΙΔΗΣΕΙΣ | 10:20:00 π.μ. | ΔΗΜΟΣ ΕΠΙΔΑΥΡΟΥ | ΛΥΚΕΙΟ ΛΥΓΟΥΡΙΟΥ



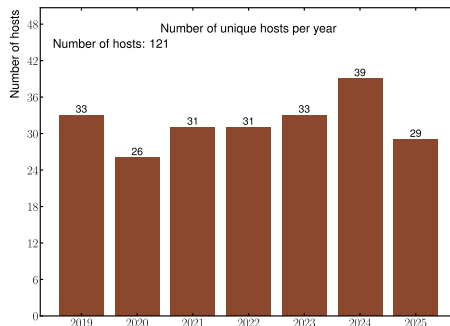
Some other remarks...

- The program has run for a while
- We are both improving and having larger demands
- It have offered very diverse opportunities, example a special VV visit with CMS in 2015 for prisoners!



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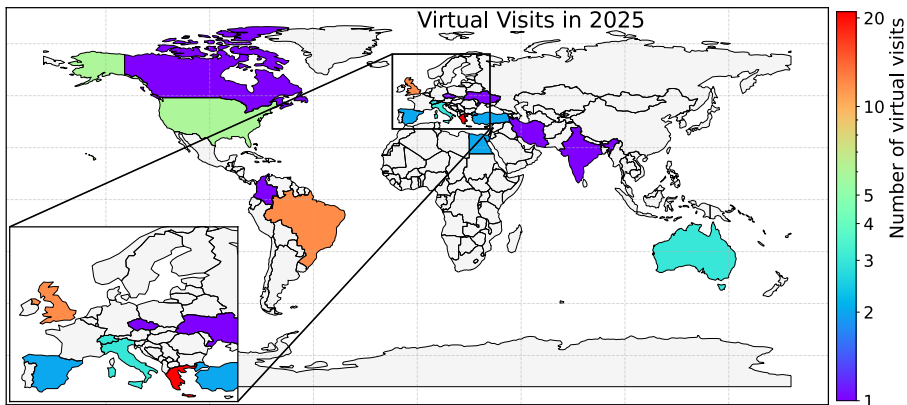
- We can see that we have a more or less stable number of guides who devote their time to keep the project alive
- Very important to find new interested people!

- ATLAS has a rich outreach program, and virtual visit is an important part of it!

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2025 map is already looking great!



THANKS FOR LISTENING

