The members of large High Energy Physics (HEP) collaborations come from all over the world. In the case of ATLAS, many of its members come from Latin-American, Middle Eastern and Sub-Saharan countries, and so, they understand that in many places, it can be a challenge to teach experimental HEP. But the entire members of the collaboration also recognize the massive potential that the always-increasing university student population has, not only concerning the fundamental physics but also regarding computing sciences skills. For that reason, several outreach teams, which include ATLAS, IPPOG, CEVALE2VE members and many other researchers, have been developing and examining costless Open Source technologies to release data and to provide effective web-based and offline environments to run, produce, save and share HEP physics analyses. After several years, and with the help of other outreach programmes like the Virtual Visits, ATLAS established an active community that is not just releasing knowledge, data and resources but genuinely training new physicists who are pursuing advanced studies in experimental HEP right now.

**ATLAS Open Data and Virtual Visits projects play a key role in the inclusion of more institutions, students and general public into the fundamental research performed by the ATLAS Collaboration!**

We deploy the resources on the CERN and ATLAS Open Data websites:
- Data samples (real and simulated) in ROOT CERN ntuple format
- Software and Jupyter Notebooks in Python and C++ to analyse the samples and produce physics analyses
- JavaScript (JS) applications to produce cut-and-count analyses
- Virtual Machines with several Linux-based OS and ROOT CERN analysis framework
- GitHub & GitLab repositories
- GitBooks to document the several possible activities

![ATLAS Open Data](https://atlas.cern)

![Virtual Visits](https://atlasvirtualvisit.web.cern.ch)

The release of resources, documentation in web-based and offline systems enhances the education in Computer Sciences.

**ATLAS Open Data + CEVALE2VE + ICTP Physics Without Frontiers program (ICTP-PWF) in Latin America**
- The Latin American section of the ICTP PWF is an effort led by Latin-American ATLAS researchers.
- The team has organised roadshows annually since 2016.
  - The roadshows were also supported by the ATLAS Collaboration and the CEVALE2VE group together with local contacts in universities.
- Several educational activities take place during the roadshows including seminars by LHC physicist, hands-on sessions where the students analyse LHC data collected by ATLAS, Virtual Visits directly to scientists working at CERN and career and opportunities sessions in HEP.

![Number of visitors per group](http://opendata.atlas.cern) ![Language used in the visit](http://atlas.cern)

**2015**  
First conversations with the ICTP Venezuelans and Colombians researchers start to coordinate a pilot project for their countries.

**2016**  
The 1st edition of the PWF-LA.

**2017**  
The 2nd edition of the PWF-LA.

**2018**  
The 3rd edition of the PWF-LA.

Four countries visited: Argentina, Uruguay, Colombia and Venezuela. In 2018 we plan to add Ecuador.