Educational and outreach resources and activities in PP for high school teachers and students

Barbora Bruant Gulejova

barbora.gulejova@cern.ch
HIGH SCHOOL TEACHERS

CERN = Science in Action

Mysteries of the Universe
Superlatives of research
How science works
Meet real scientists

Teacher

School students

Teachers = mediators
Role models
Multipliers
Bring modern science to schools

Raise interest in science
Instil feeling of discovery potential

x 1000
HIGH SCHOOL TEACHERS

Teaching resources: Animations

http://cern60.web.cern.ch/en/exhibitions/animations-1
International Particle Physics Outreach Group

“IPPOG is an umbrella for making outreach global”

http://ippog.org/

Database of resources (WG7 😊)

http://ippog.org/resources
Activities and programs for students and teachers

- MASTERCLASSES
- CASCADE
- BEAMLINE FOR SCHOOLS
- COSMIC RAYS
- more…

http://ippog.org/
Cosmic rays global

International Muon Week

https://quarknet.i2u2.org/group/international-muon-week

Existing educational projects

https://icd.desy.de/e49245/
IPPOG pilots World Wide Data Day

Imagine a 24 hour span of masterclass-like videoconferences for students and teachers in the schools. To cover that, we'd need world-wide collaboration. And the students would need simple measurements that their teachers can readily explain. Well, we are getting there with the pilot of World Wide Data Day (W2D2) on 2 December this year. Students will measure theta and phi of muon tracks in dimuon events from online ATLAS and CMS displays and try to understand their distributions. Physicists at TRIUMF, CERN, Fermilab and even in Australia will be on hand to help them see the big picture when they connect on Vidy.

Contact Ken Cecire (kcecire@nd.edu) to discuss how you, a colleague or a good physics teacher you know might be involved.
For example

Find with links in IPPOG newsletter:

Teaching scenario: http://tools.inspiringscience.eu/delivery/view/index.html?id=4e02bc093ba843a0bcc03c7bb34f9d74&t=p

Cloud chamber simulation (magnetic field and more): http://www.kcvs.ca/site/projects/physics.html

Go Lab portal: repository of online laboratories and lesson plans in many subjects and languages http://www.golabz.eu/labs

Go Lab atom: http://www.golabz.eu/lab/atom

Go Lab radioactivity lab: http://www.golabz.eu/lab/radioactivity-lab

and many others..... for your extra-curriculum activities or enrich your lesson plans