



IPPOG Meeting Nov 2017 – Swindon Office Public Engagement

E. S. Cunningham, Particle and Nuclear Physics Outreach Officer

30th October 2017

Institute for Research in Schools - CERN@school

<http://www.researchinschools.org/our-projects.html>

The Institute for Research in Schools – a charity that aims to engage school students and their teachers with fundamental research are still running their four particle physics related projects:

- CERN@school

Students use CERN technology (Medipix detectors) to do experiments and research in the classroom.

- TimPix

Gives students access to radiation detectors on the ISS to measure the astronauts radiation levels. Students made BBC news: <http://www.bbc.co.uk/news/uk-39351833>

- MoEDAL

Enables school students to join particle hunters at the LHC looking for the magnetic monopole.

- Higgs Hunters

Gives students access to ATLAS data and teaches them how to make classifications.

IRIS now have 465 schools signed up and are running the next CERN@school symposium at the STFC Rutherford Appleton Laboratory on the 16th November – with 1/3 programme dedicated to student presentations on their research.

School and teacher visits to CERN

We continue to email teachers before and after their trip to CERN with information and resources. We now have feedback on CERN visits from 75 teachers. A summary of the data is given below; the values are averaged scores out of five:

Average rating out of five: 4.39

What age group of students did you bring to CERN? 83% (Over 16) 10% (14-16 years)

Do you intend to bring another group to CERN? 100% (Yes)

How did the visit/event make you feel?

I felt welcome: 4.55 I felt parts of the day were useful to me as a teacher: 4.41

I felt inspired: 4.45 I was able to join in and be part of the visit: 4.40

Was your visit to CERN...

Relevant to the curriculum? 4.39

Pitched at the right level for my students? 4.00

Useful for my teaching? 4.16

Inspirational beyond the curriculum? 4.63

What will you do next?

I would like to find out more about what I've learnt today when I get back: 3.94

I will use this CERN visit to add context to my lessons when talking about relevant topics in the classroom: 4.43

I would recommend a visit to CERN to others: 4.71

I would be interested in attending a CPD on this topic in the future: 4.08

This event will help me highlight possible careers to our students: 4.49



After attending this event...

I have learnt some new skills, activities or tools to take back to the classroom: 3.86

I know where to look to find out more: 4.02

The top three most common visits were:

1) Universe of particles 2) Microcosm 3) Visits: ATLAS, SM-18 or CMS

The most useful/best parts of the visit were:

1) The guide/scientists 2) Visit to CMS 3) Intro. lecture and guided tours

What could be improved:

1) Tours underground 2) Intro. lecture 3) Speaker/tour guide

The tour guide and introductory lecture appear both in 'the most useful part of the visit' and in 'what could be improved'. The comments for improvements were centered around level: 'Lecturers did not understand how to communicate to younger students.' 'Slightly higher pitched than the students level.'

Overall teachers experiences at CERN are still very positive with lots of them singing the praises of their guide: 'Excellent guide, great tour.' 'The visit really brought the topic to life for our students - and it was great to see so many people passionate about what they do.'

Masterclasses

<http://www.stfc.ac.uk/public-engagement/for-schools/particle-physics-masterclass-programme/>

In the UK, 19 institutions ran particle physics masterclasses in 2017 and 2611 students attended.