



Programme Objectives

Konrad Jende, UK Teacher Programme 2015

LHC 27 km

SPS 7 km

PS 6.28 km

SUISSE
FRANCE

CMS

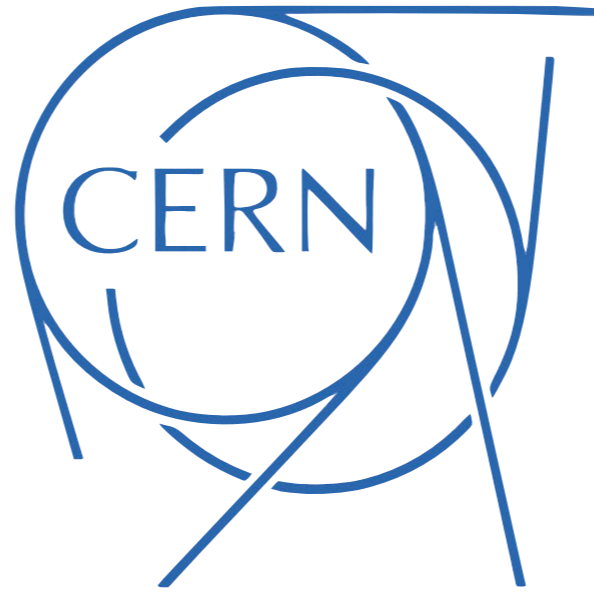
LHCb

CERN Prévessin

ATLAS

CERN Meyrin

ALICE



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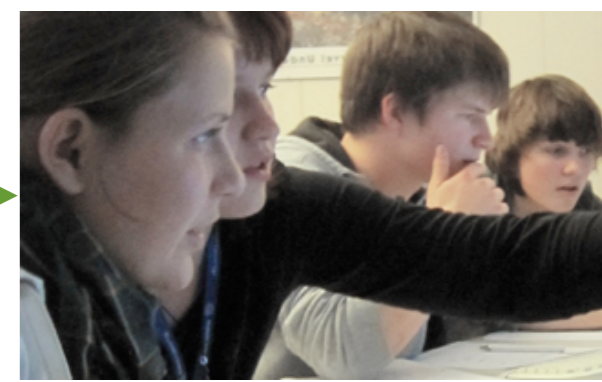
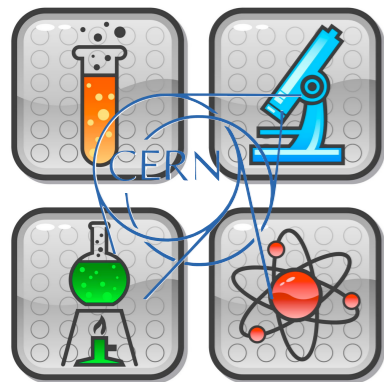
Why do we do all this?



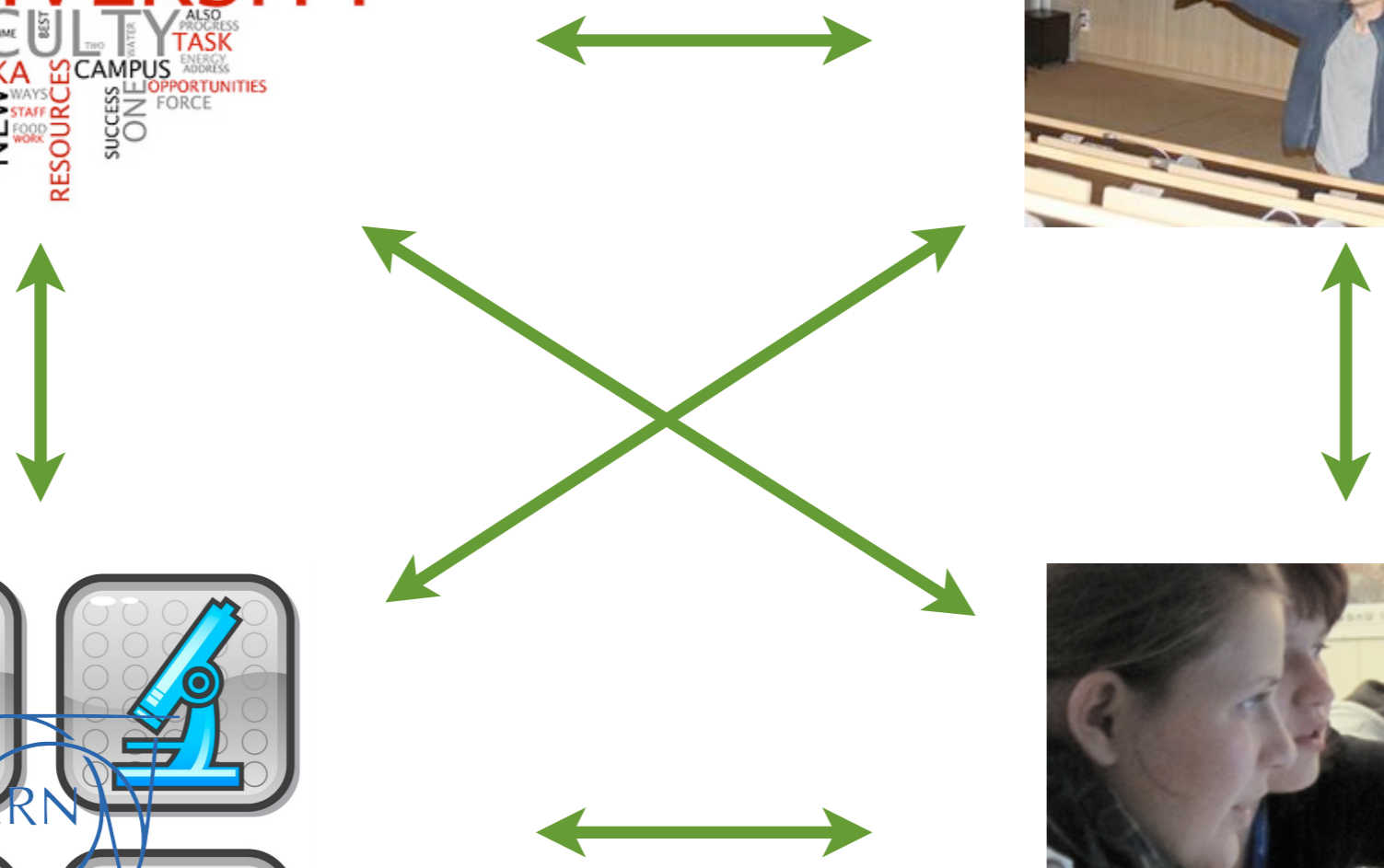
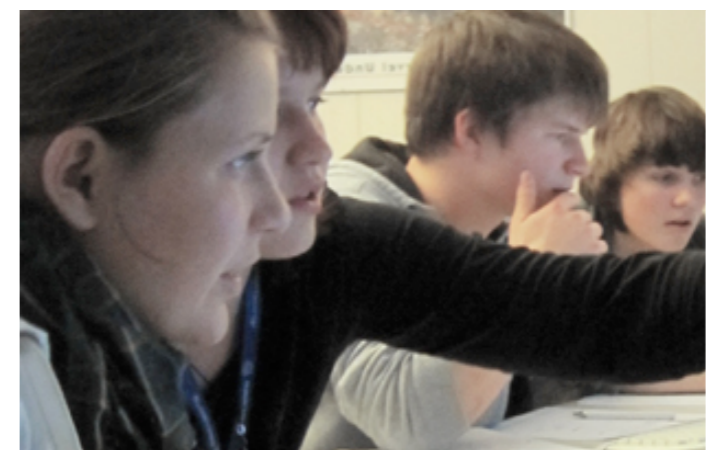
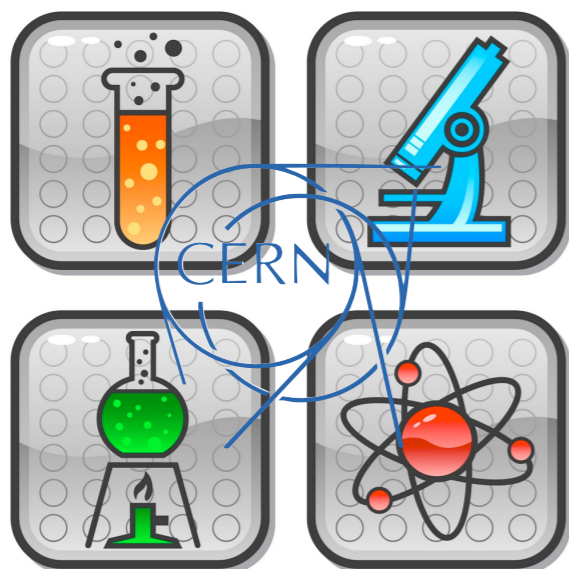
We do this because . . .

- school students are interested in particle physics
 - the field faces many unresolved problems
(Elster 2007, Matthews 2007, Finlayson & Roach 2007, Christidou 2006, Lavonen et al. 2005)
 - the field produces inventions and discoveries that have the potential to change the world
(Elster 2007, Matthews 2007, Finlayson & Roach 2007, Christidou 2006)
- school students have positive attitudes towards Science
 - but (unfortunately) they do not have them towards school science
(Osborne et al. 2003, Sjøberg & Schreiner 2010)
- Europe and the world needs scientists and we need to educate students about '*the major explanations of the material world that science offers and about the way science works*'
(Osborne & Dillon 2008, p. 15)

How to bring modern science into classroom?



How to bring modern science into classroom?



We need you!



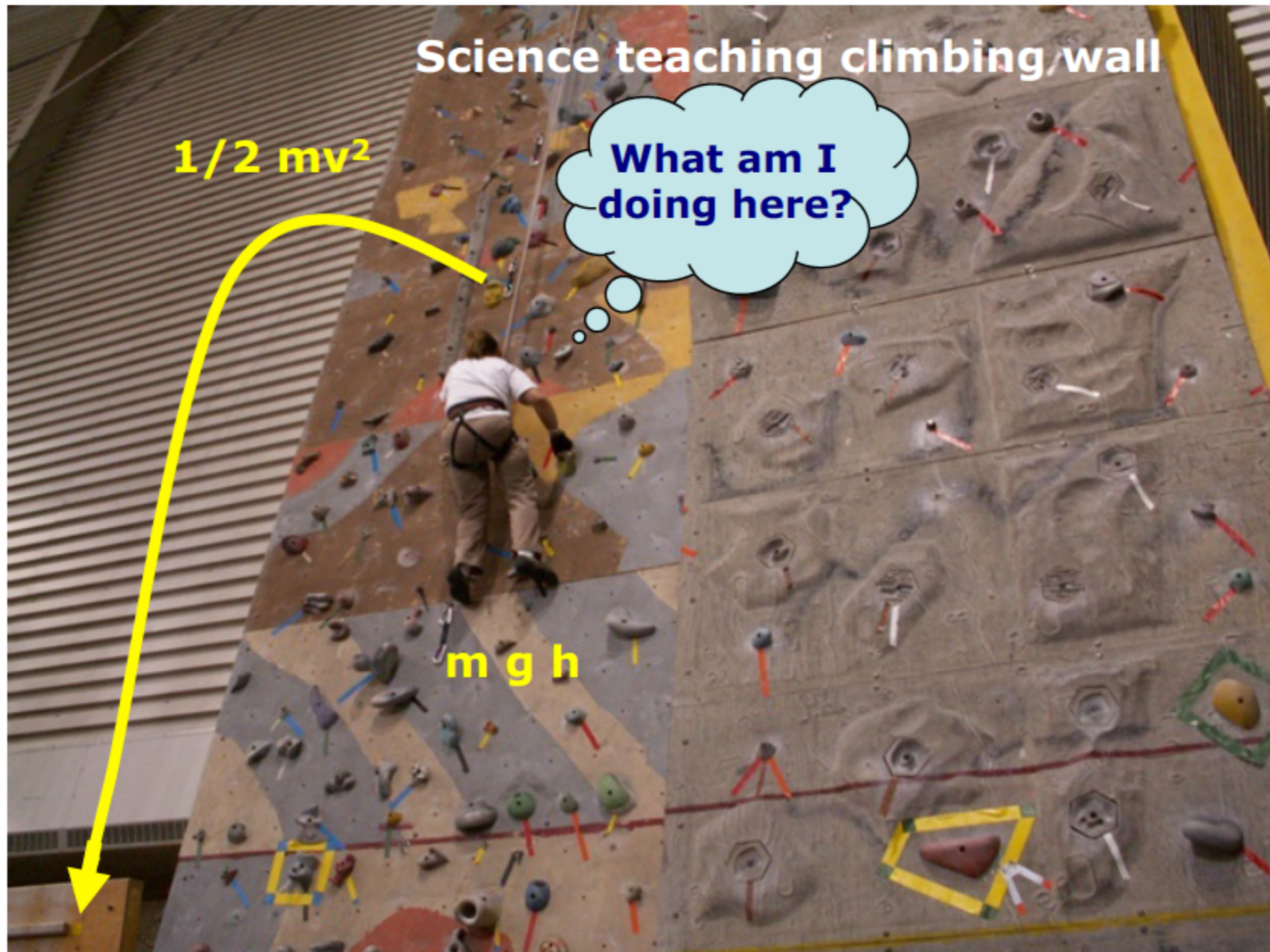
Our objectives

- Raise and Maintain the interest of students in moderns science
 - Motivate them to continue scientific education at school
 - help them to better understand the physical world
- Instil a feeling of mystery and discovery potential
 - Motivate students to study science/engineering at universities
- Improve scientific literacy
 - Prepare the future generation of scientists/engineers

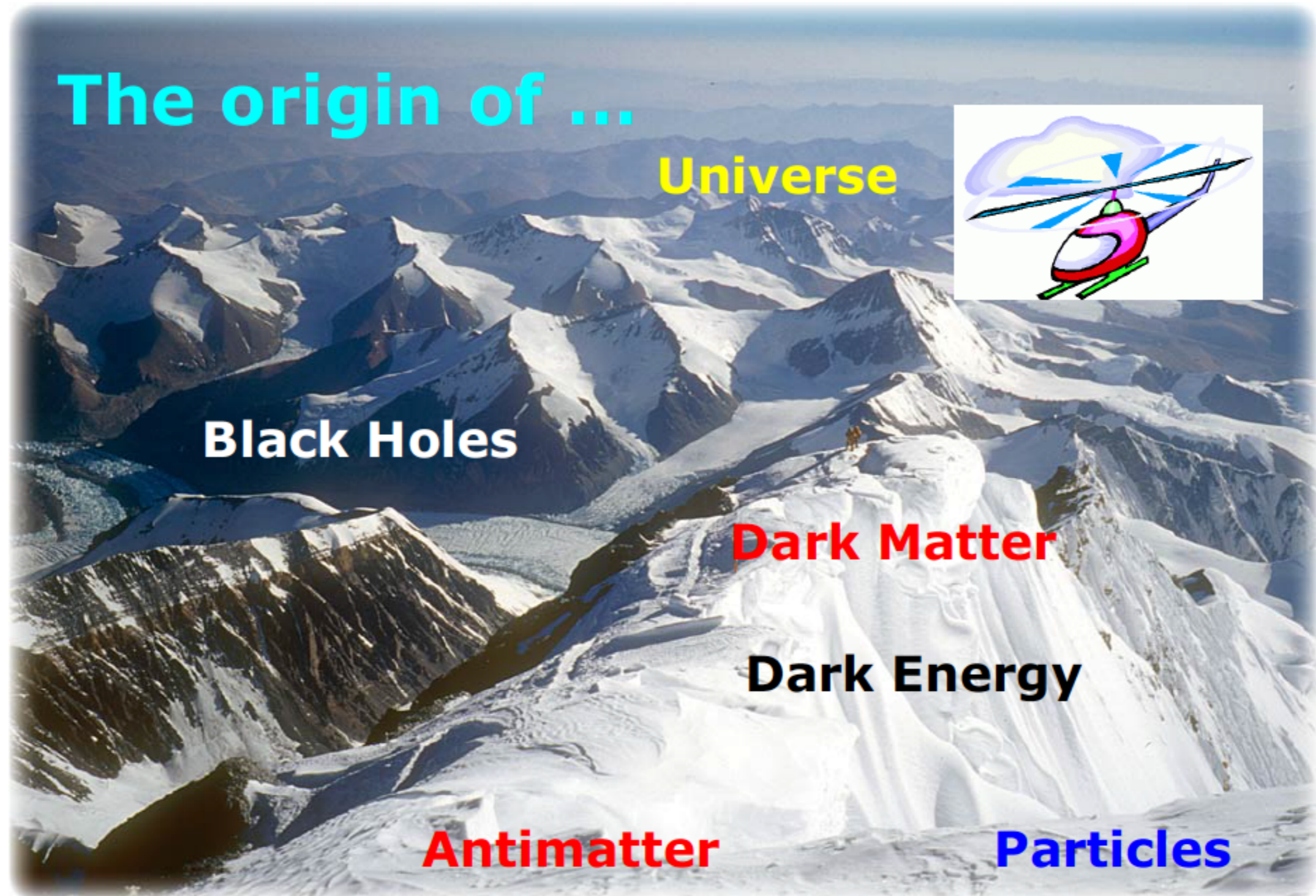
How researchers view science



How students view science



Take students on a sight-seeing tour



Link modern physics to school curriculum

CERN's Teacher Programmes

Lectures



Discussions



Work groups



Visits



Hands-on workshops



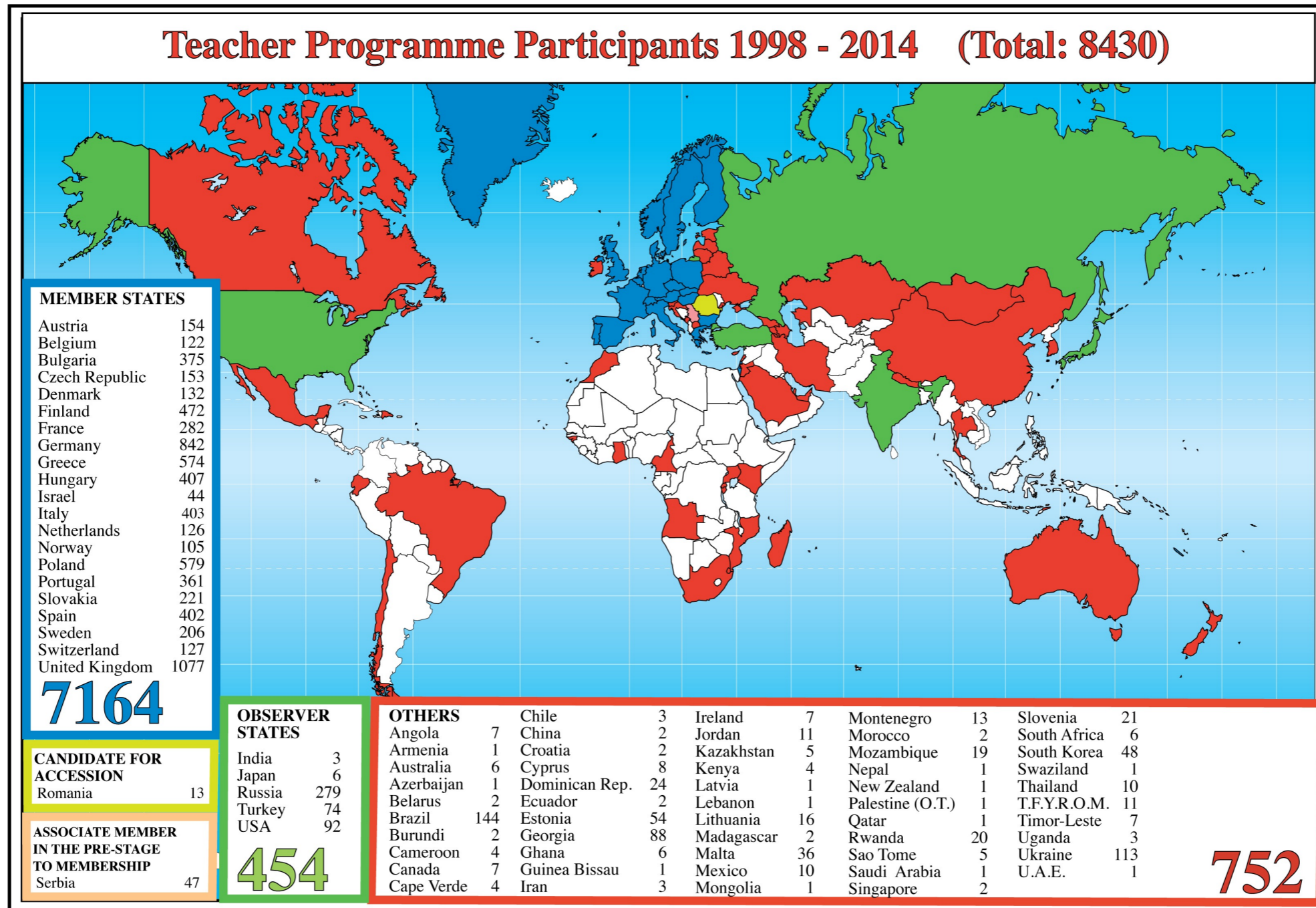
Social events



CERN's Teachers' Programmes

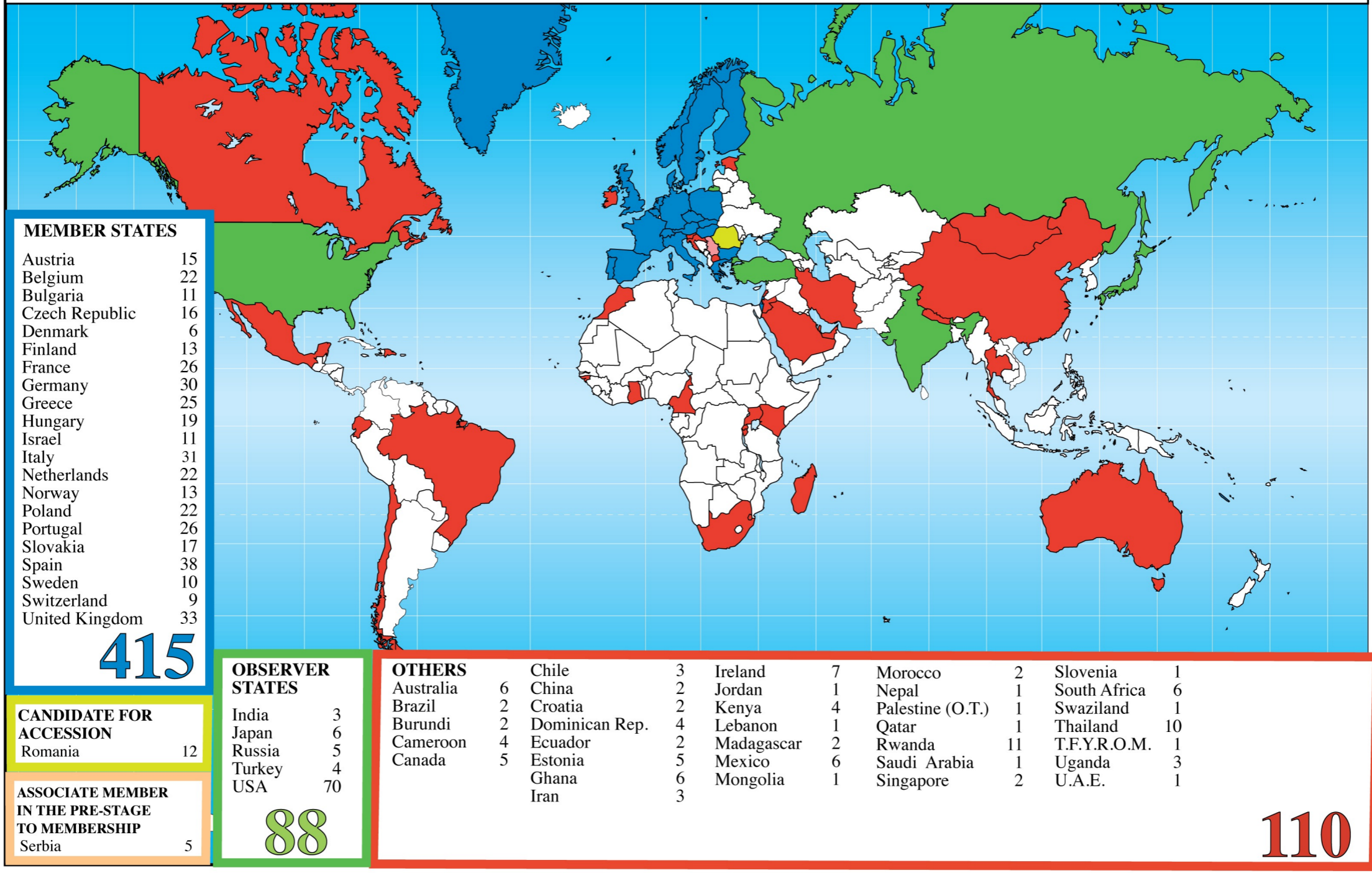
- (1) 2 days to one week long national teachers' programmes (NTP) in native language
- (2) three week long High School Teachers Programme (HST) in English

CERN's Teachers' Programmes - Stats 1



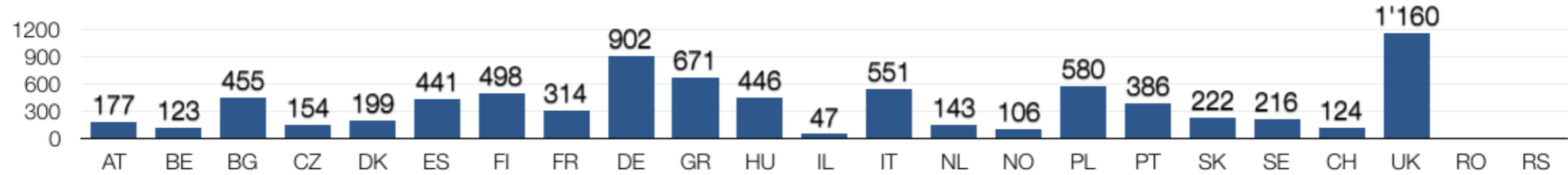
CERN's Teachers' Programmes - Stats 2

HST Programme Participants 1998 - 2014 (Total: 630)

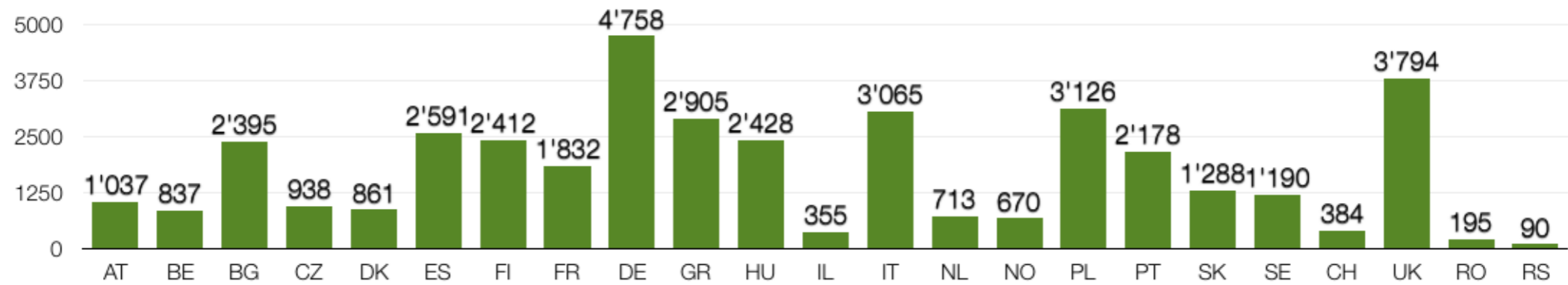


CERN's Teachers' Programmes - Stats 3

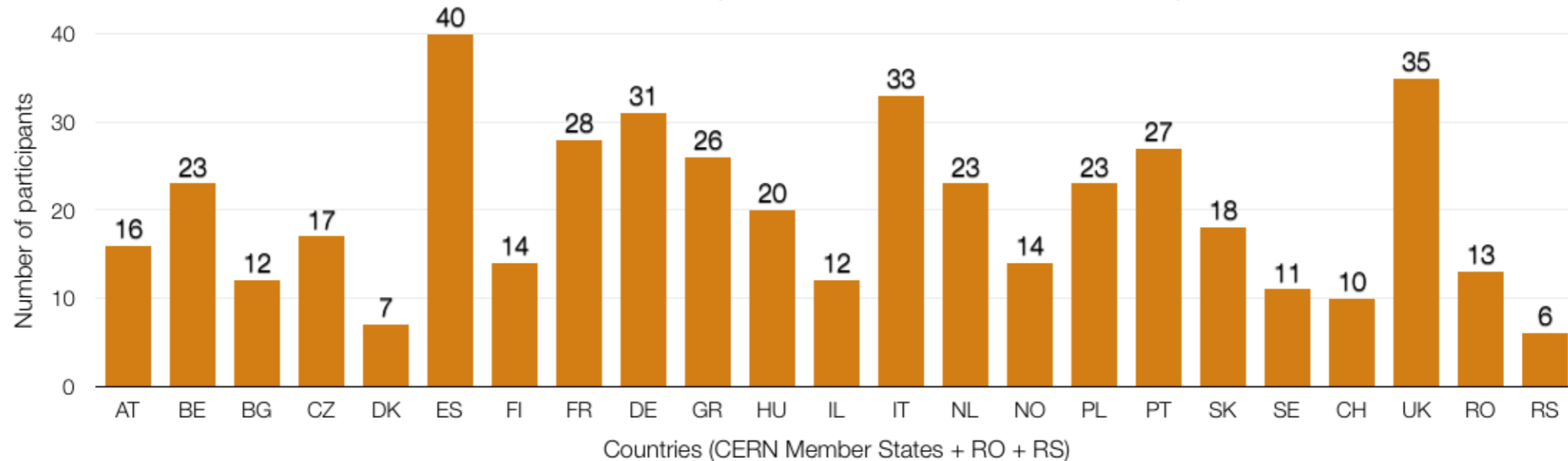
Total Number of Teachers attended any sort of Teacher Programme vs Nationality (1998 - 2015, member states + RO + RS)



National Comparison of number of teachers times days spent (1998 - 2015, member states + RO + RS)



Nationalities at HST (1998 - 2015, member states + RO + RS)



Outcome and To-Do-List

- newly inspired, motivated and confident teachers
- inspiring and motivating teachers

- Share your experience with your students!
- Share your experience with colleagues!
- Share your experience with the general public!

- Act as ambassador for science/engineering in general and particle physics in particular
- Organize follow-up activities
- Promote our programmes

Any questions?



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References

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