



CERN

LHCb

ATLAS

CERN Meyrin

CERN Prévessin

SPS 7 km

PS 6.28 km

ALICE

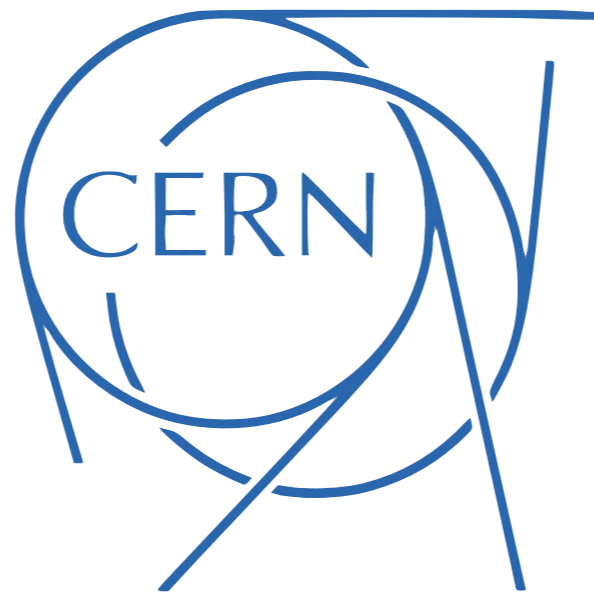
SUISSE
FRANCE

CMS

Programme Objectives

Konrad Jende, Hungarian Teacher Programme 2015

LHC 27 km



Programme Objectives

Konrad Jende, Hungarian Teacher Programme 2015

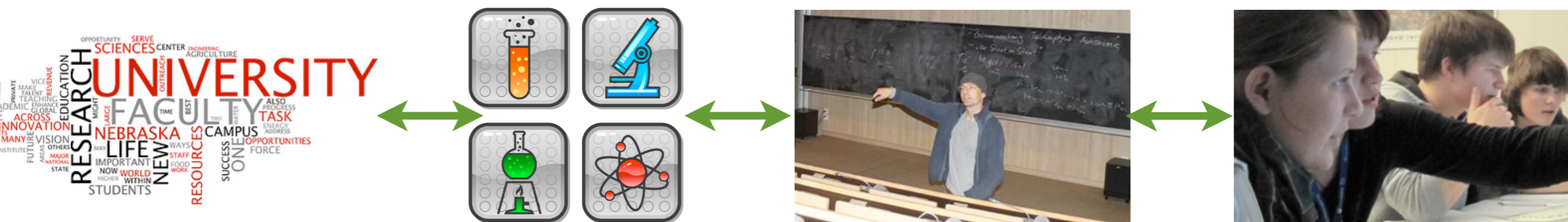
Why do we do all this?



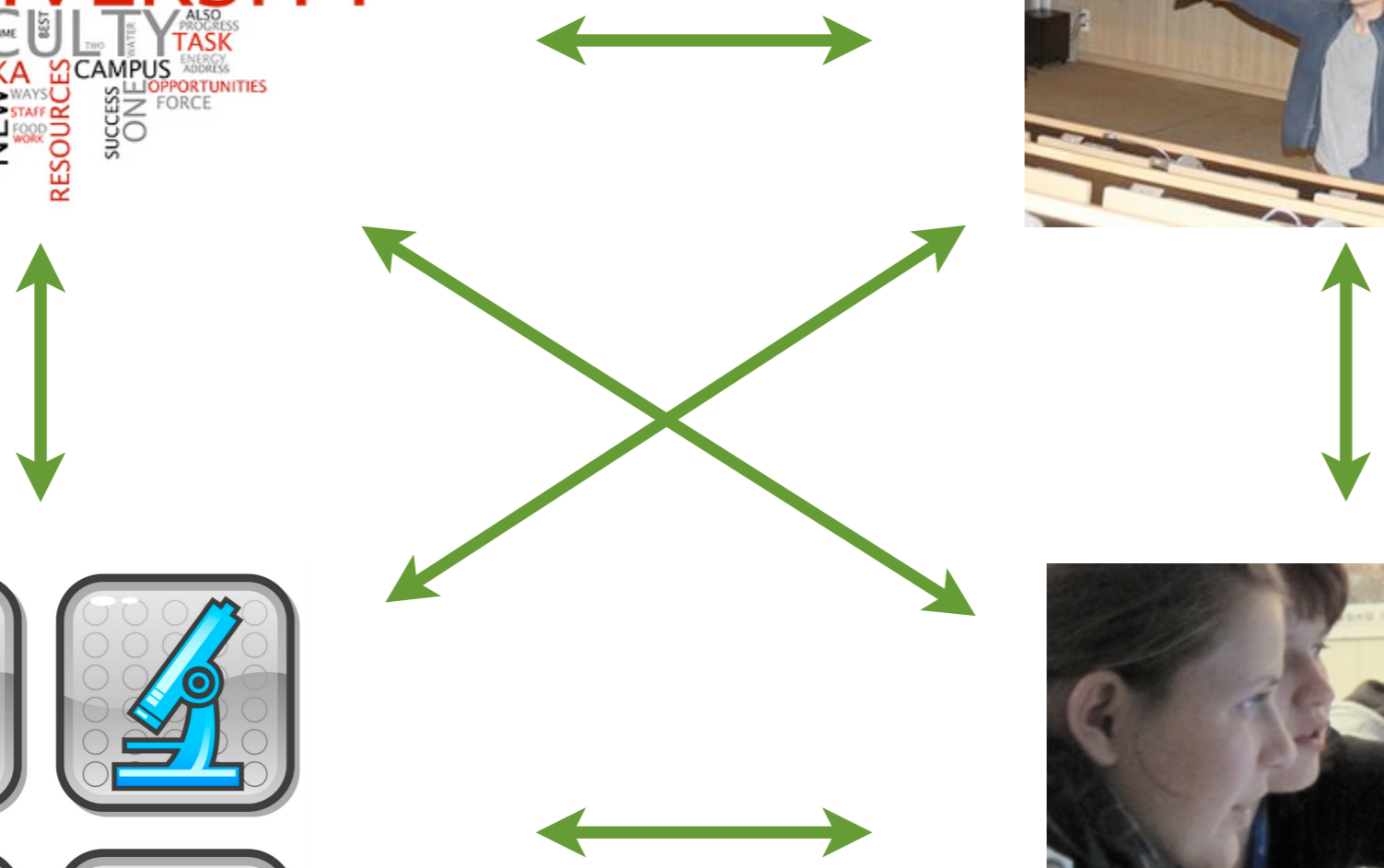
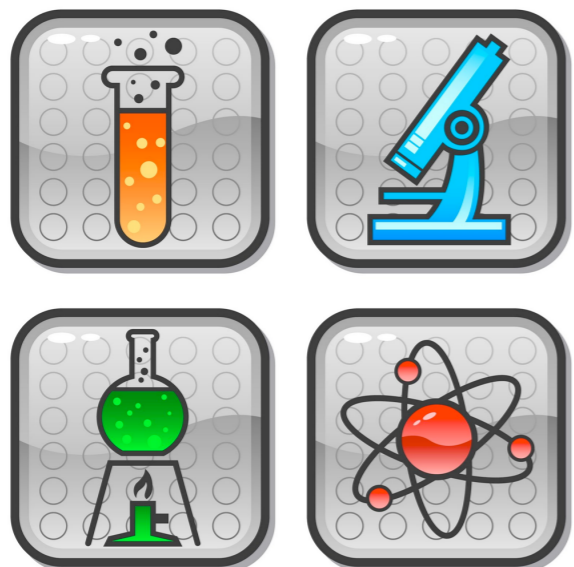
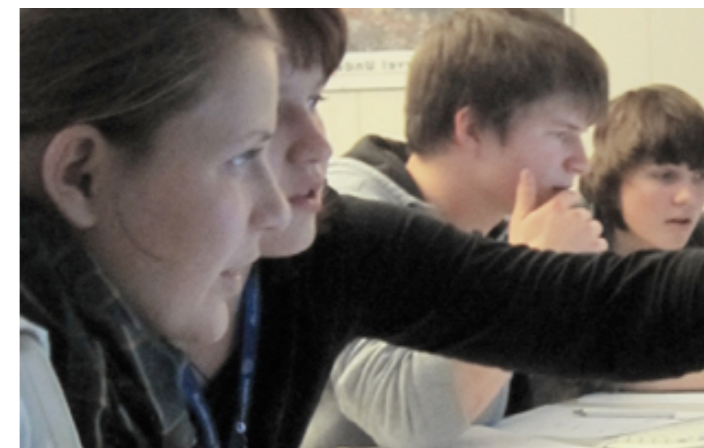
We do this because . . .

- 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!



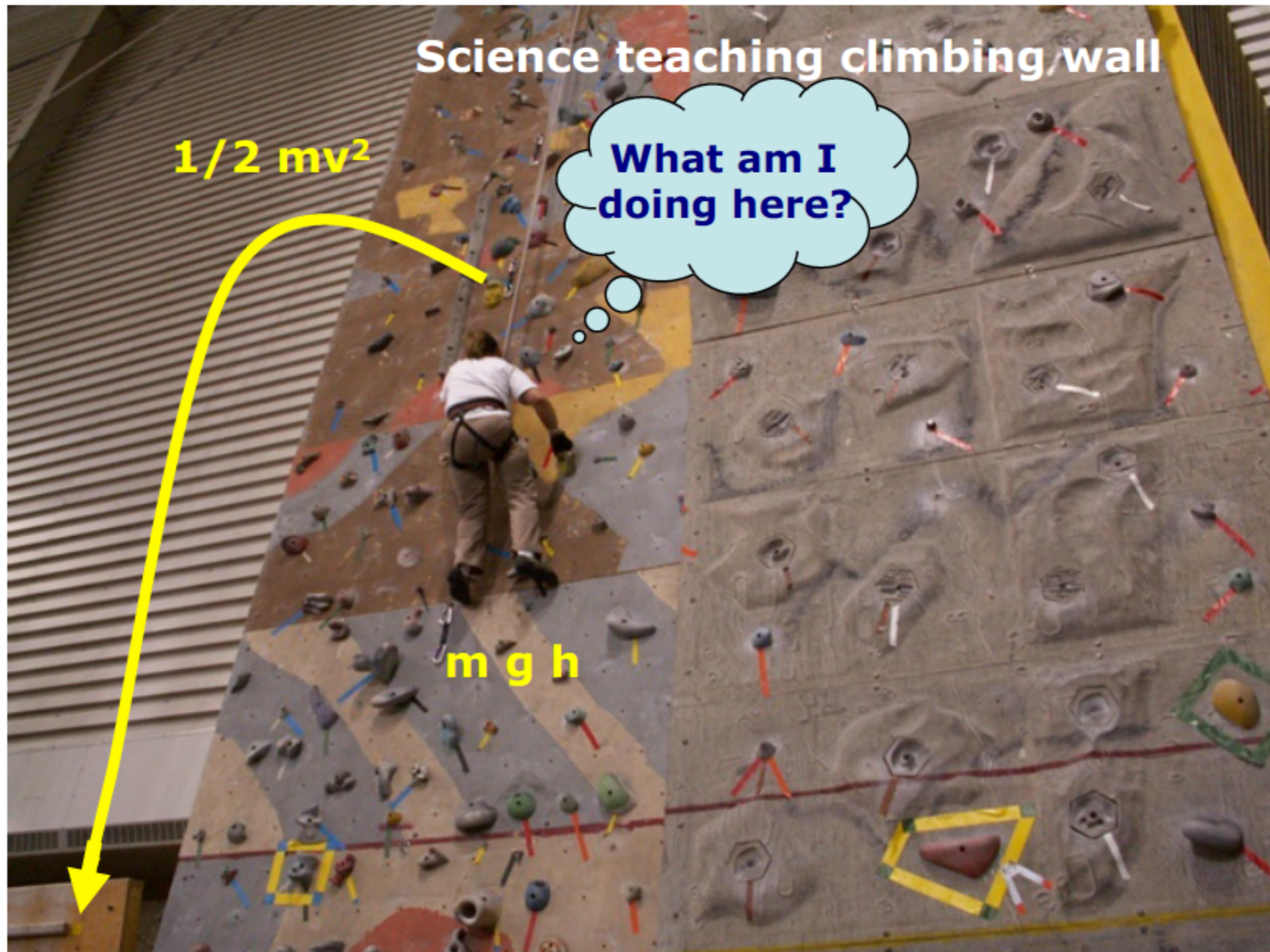
Our objectives

- 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



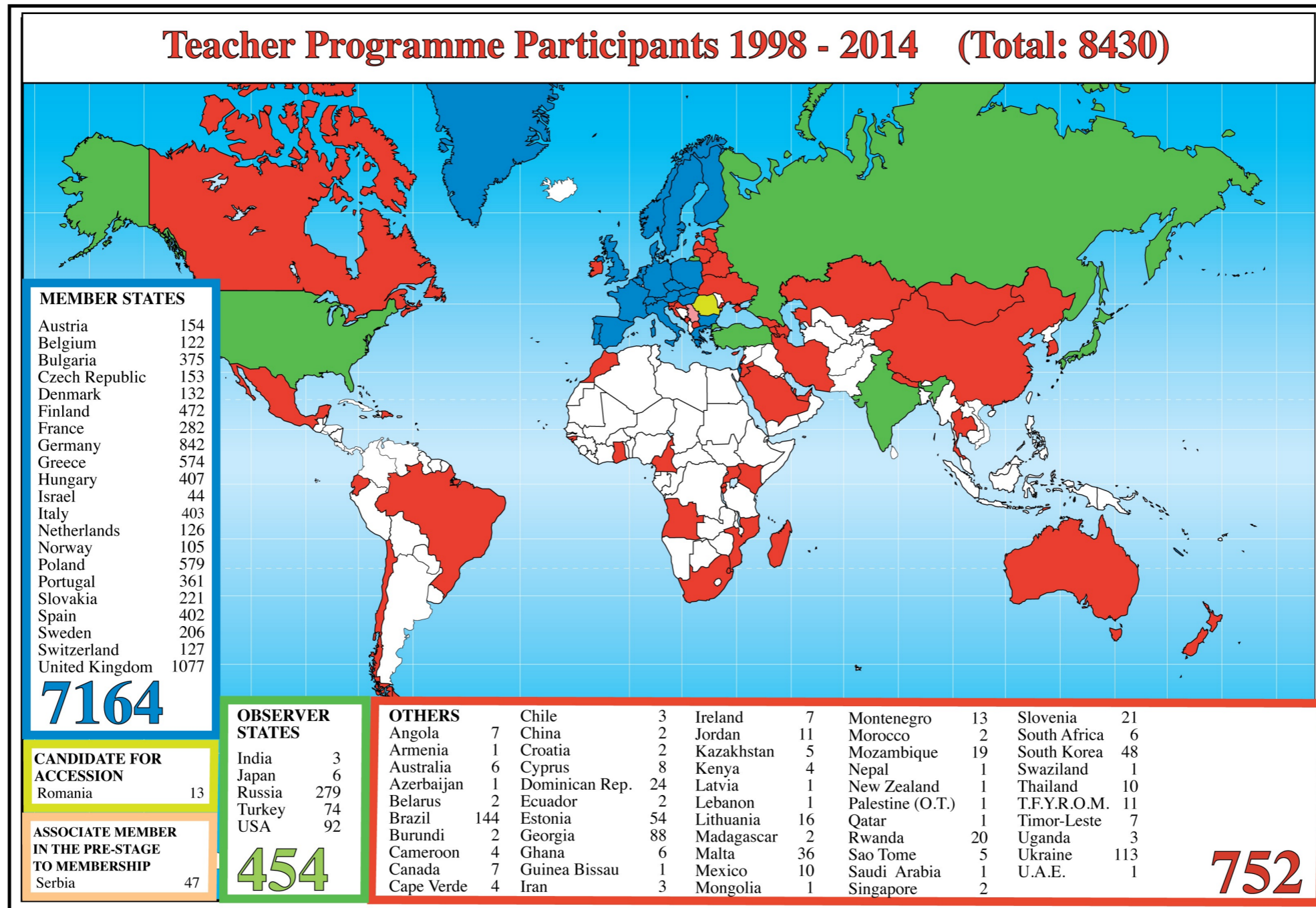
Social events



CERN's Teachers' Programmes

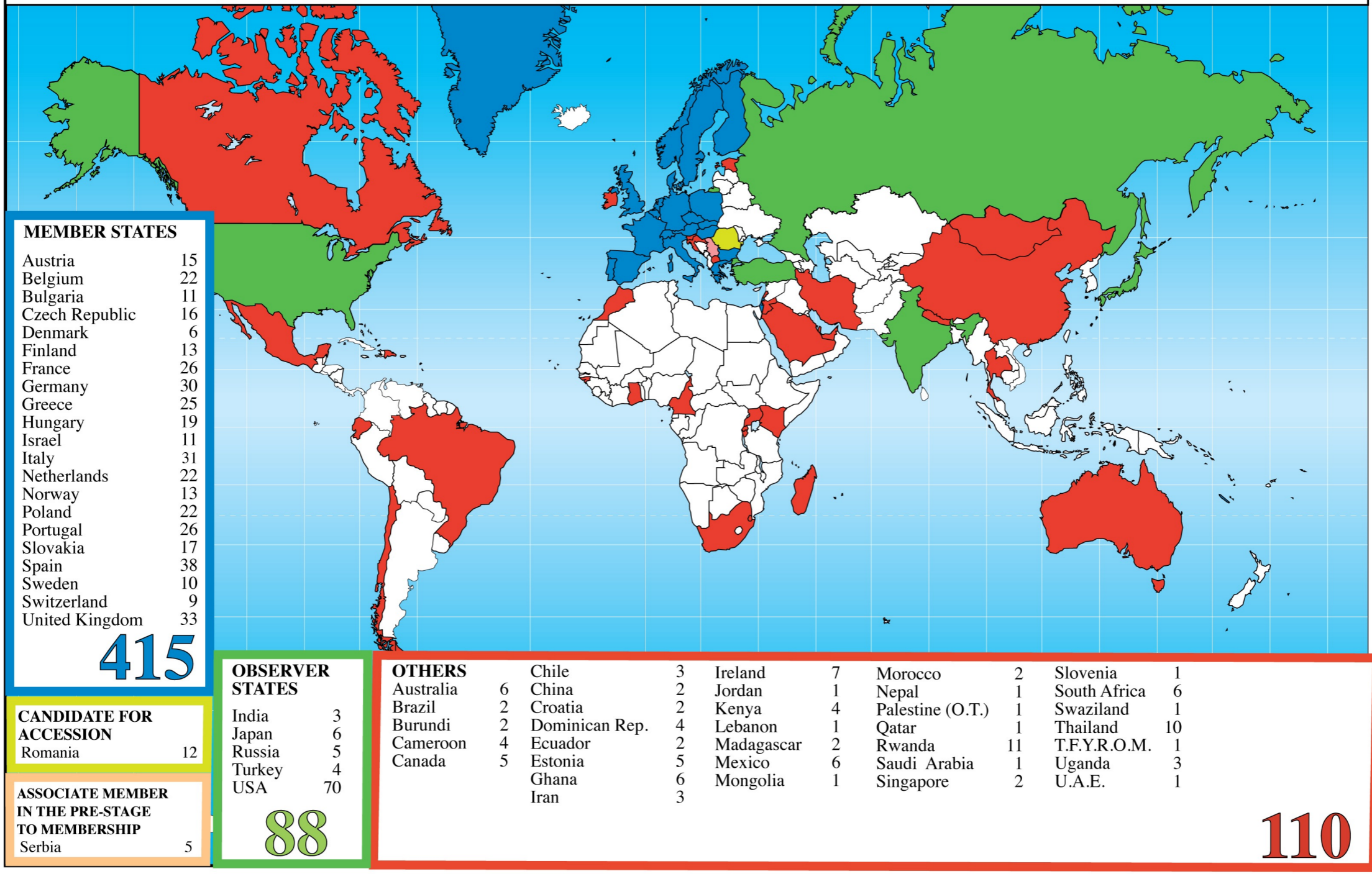
- (1) 2 days to one week long national teachers' programmes (NTP) in native language
- (2) three week long High School Teachers Programme (HST) in English

CERN's Teachers' Programmes - Stats 1



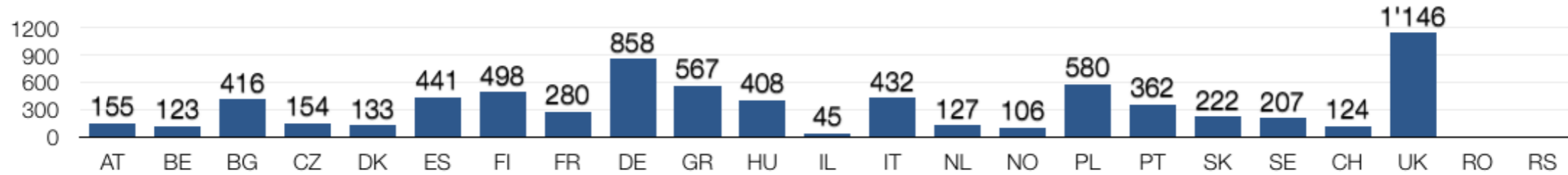
CERN's Teachers' Programmes - Stats 2

HST Programme Participants 1998 - 2014 (Total: 630)

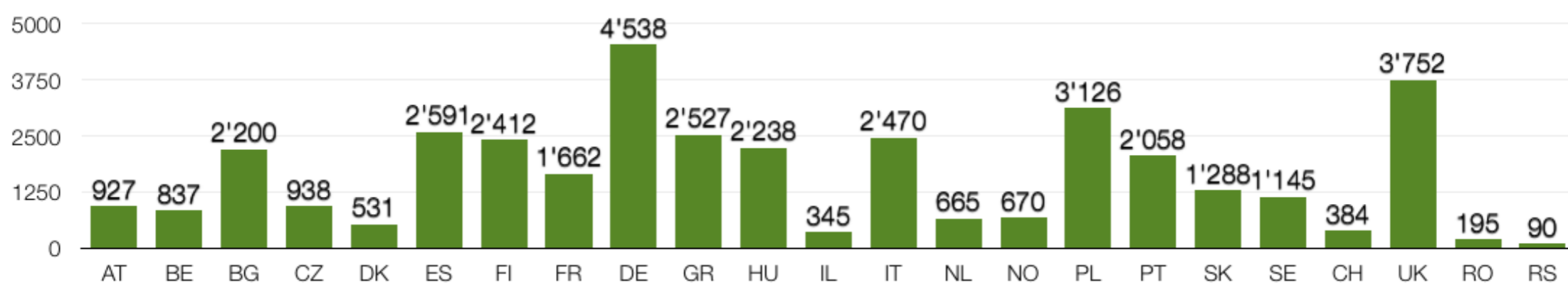


CERN's Teachers' Programmes - Stats 3

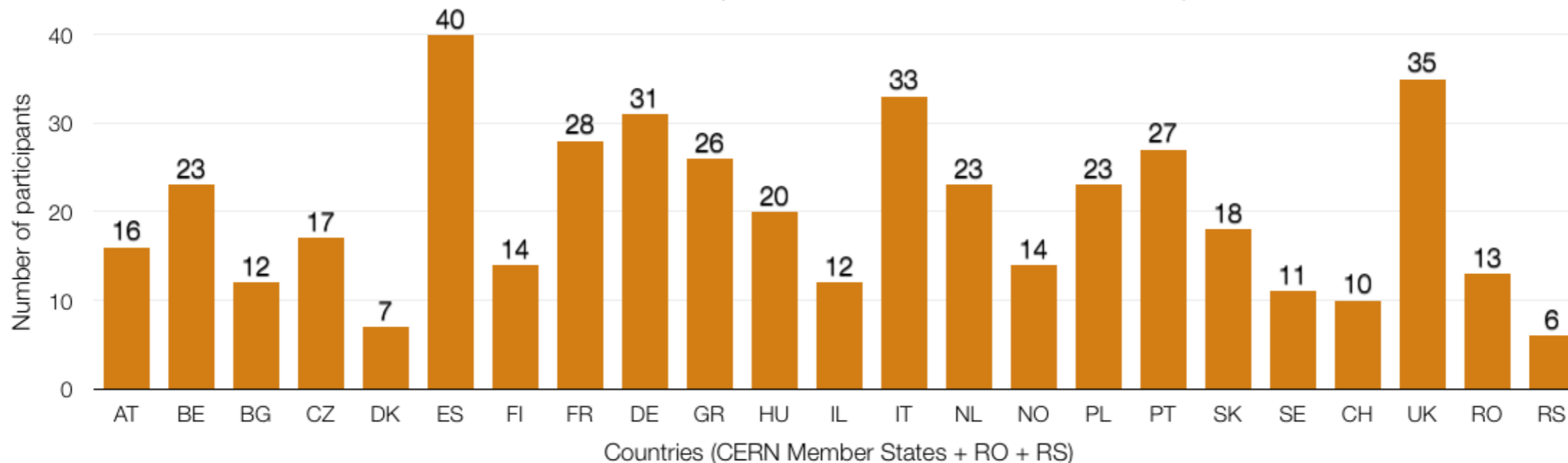
Total Number of Teachers attended any sort of Teacher Programme vs Nationality (1998 - 2015, member states + RO + RS)



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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