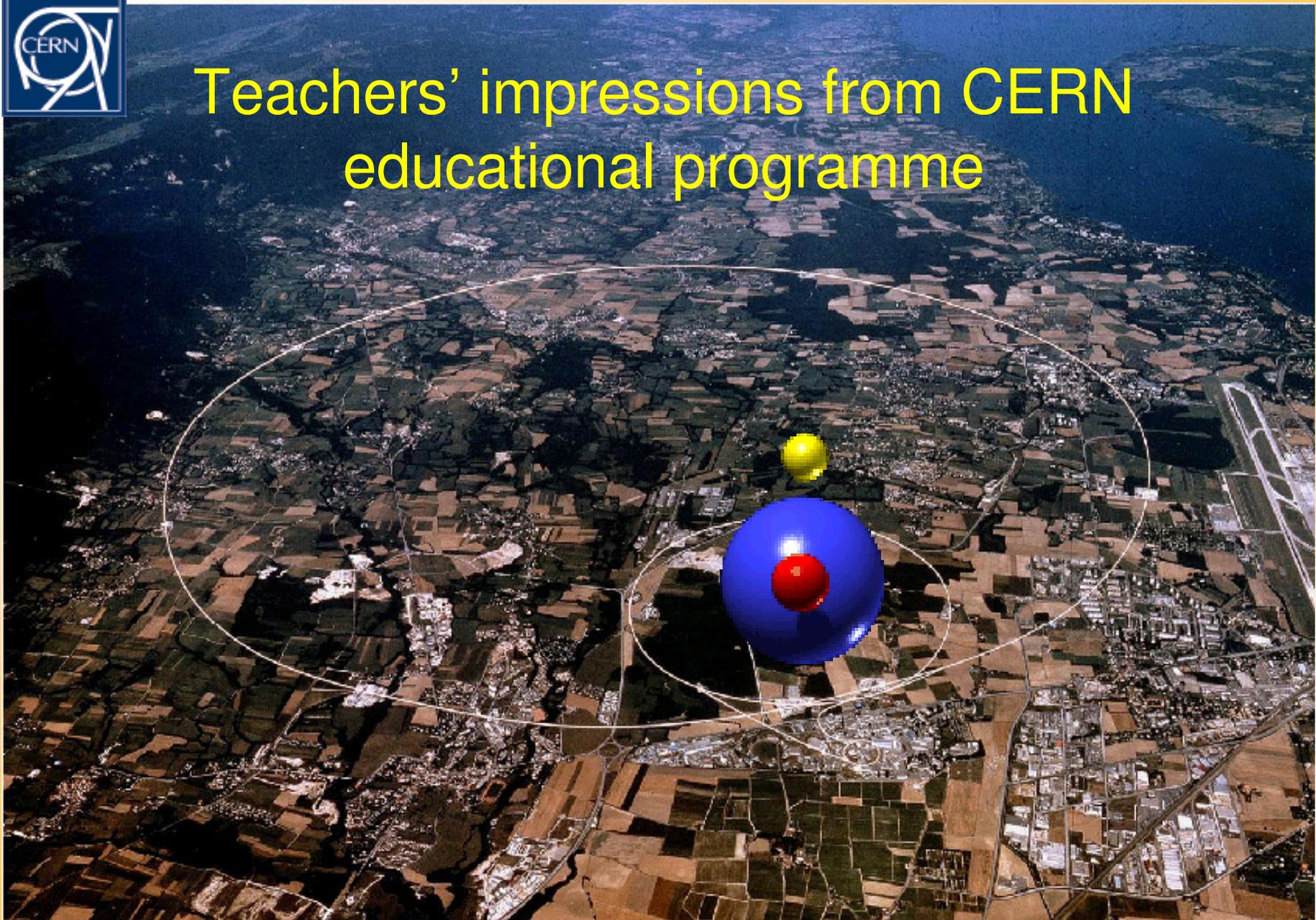




Teachers' impressions from CERN educational programme



Welcome to CERN





CERN by night

Participants of the educational programme from Poland

- **HST - International courses in English**
17 Polish teachers in **ten** years (1998 – 2007)
(~2 per year – Polish contribution to CERN budget)
- **Polish Teacher Programme**
In 2007 – 3 groups of over 40 people
In 2008 – 2 groups of over 40 people
Altogether **over 200** teachers in **one** year

How did Polish programme start?

January 2007 – CERN's Coordinator of Teacher Programme Mick Storr visits Poland

- Initiated and organised by HST teachers and scientists from IPJ, UW Warszawa, IFJ Kraków, US Katowice
- Meetings with teachers, students and the local authorities in Warszawa, Łódź, Katowice, Kraków
- Meeting with people from MEN

Courses initiated by the visit

- **April 2007** – the course organised by University in Katowice for teachers from the regions of Katowice, Łódź, Warszawa – financed by the local authorities
- **May 2007** – the course organised by CODN for teachers from all over Poland – financed by the Ministry of Education

Advantages for teachers

- Broadening knowledge of Particle Physics
- Visiting famous research centre
- Contact with scientists
- Availability of teaching materials to use in school
- Psychological aspect - Enthusiasm and creativity in teaching
- Social aspect - Integrating with other Physics teachers

Lectures

- Particle Physics
Accelerators and Detectors Physics
- Applications of Particle Physics in:
Cosmology, Astronomy, Astrophysics
- Practical implementation of Particle Physics
 - a) in medicine: diagnosis and therapy of cancer
 - b) in industry: food processing

Very interesting lectures



Discussions after lectures



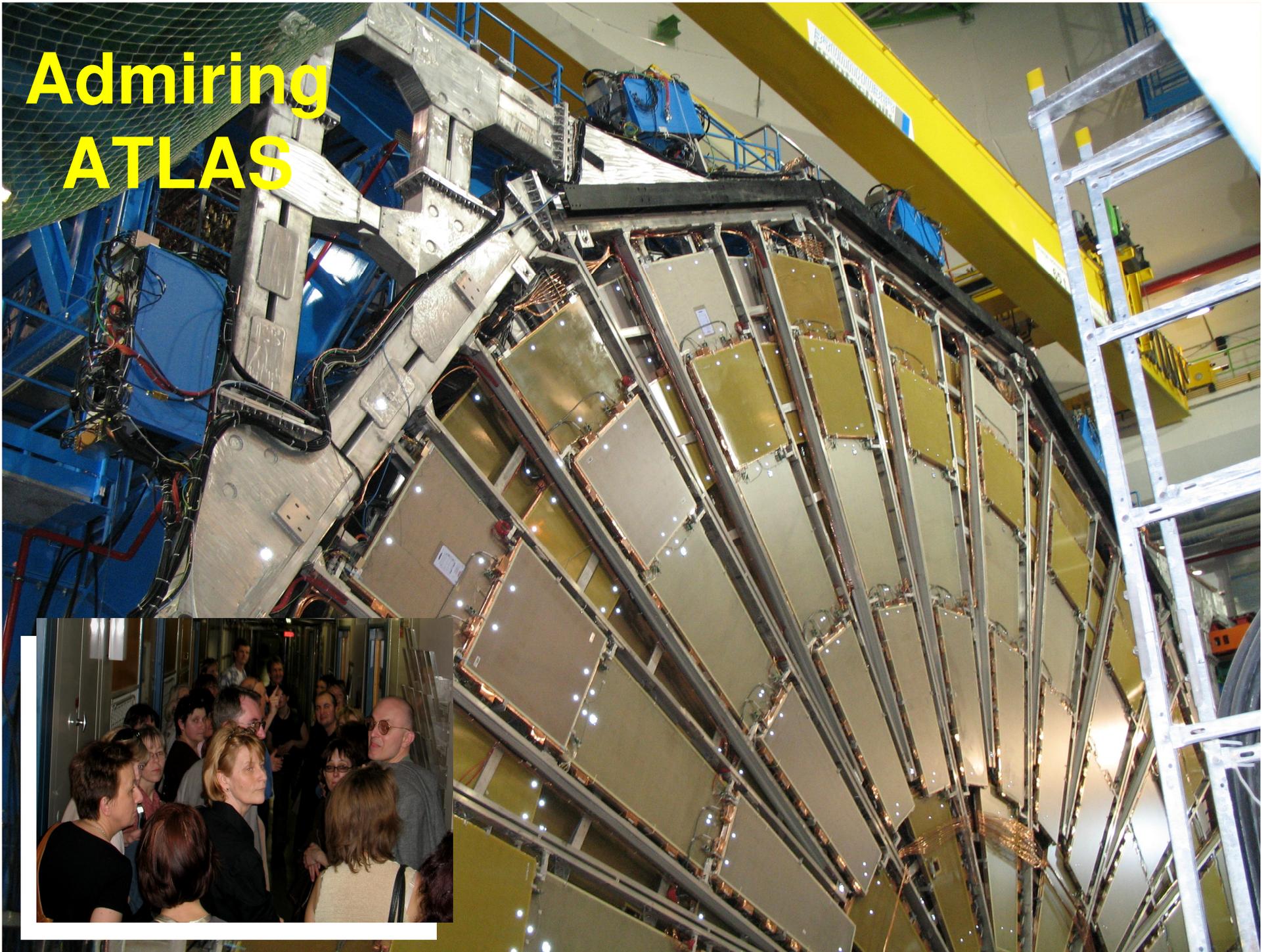
Discussions in groups - homework



Visiting LHC



Admiring ATLAS

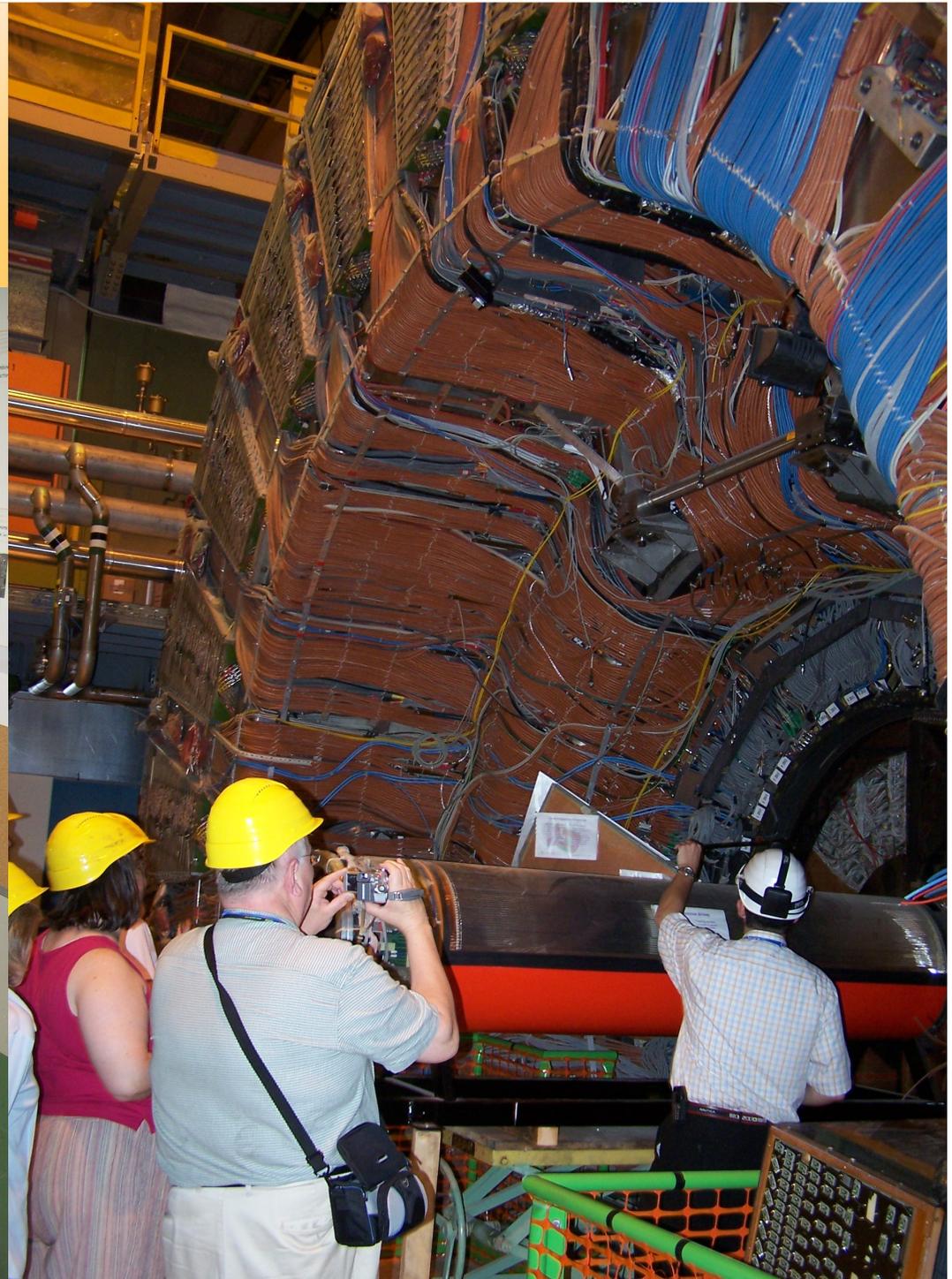


Observing scientists in their work

Scientist's explanations



Scientists' demonstrations



Hands-on activity building a cloud chamber



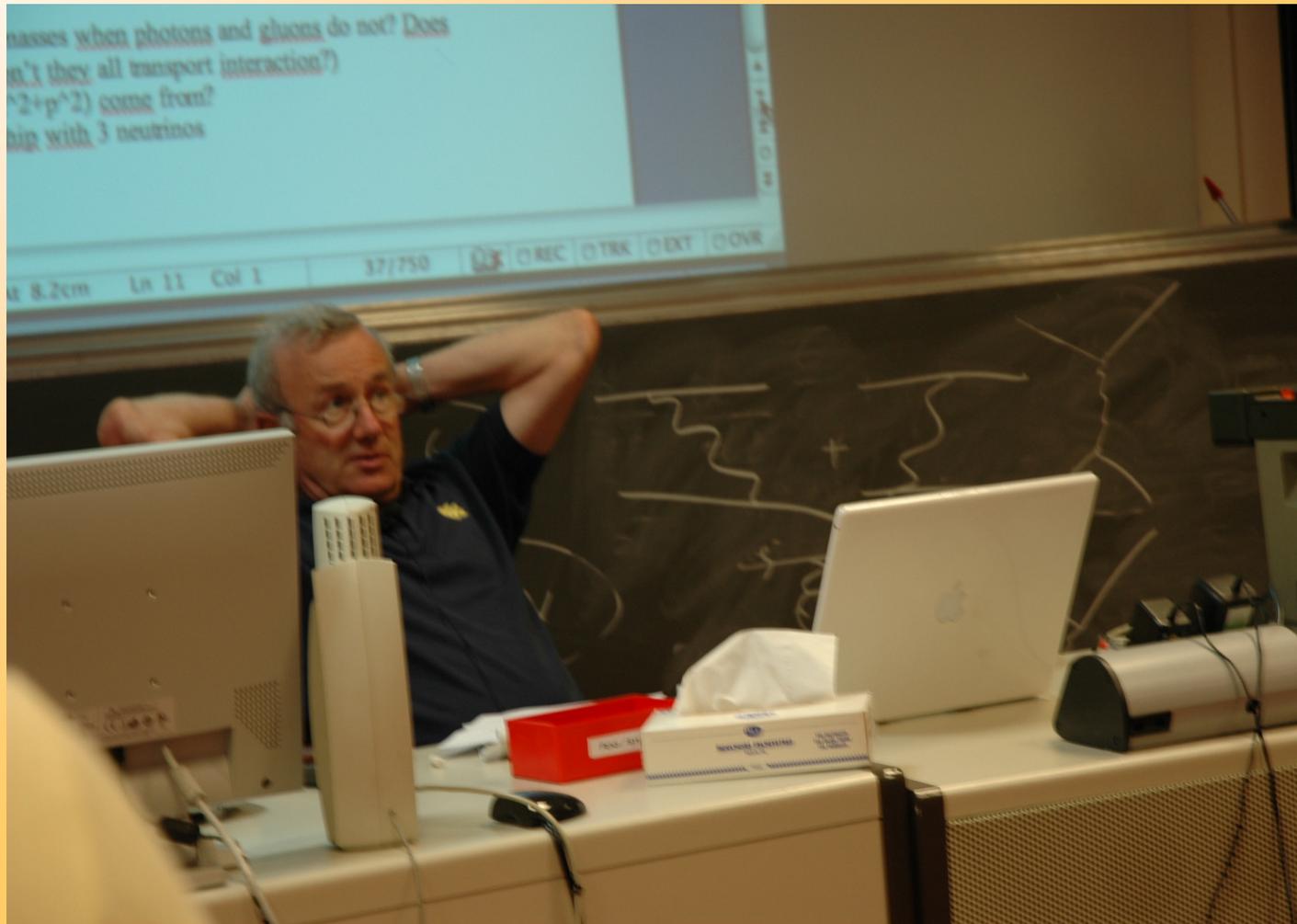
Materials for teaching

- All lectures are recorded and available on the CERN website
- Not only for participants but for all Polish teachers
- No problem with language – all in Polish

Psychological aspects

- Excitement at seeing famous research centre: LHC, ATLAS
- Experience the atmosphere of being on the verge of scientific discovery
- Curiosity about learning deeper and deeper into basic science
- Finding new ideas in teaching
- Humour – essential in bringing modern physics into the classroom

Enthusiasm from lecturers



Teachers' Integration



Visiting Polish institutes IPJ Świerk



Visiting Polish institutes IFJ Kraków



Teachers' follow-up activities

- **Motivated teachers in the classroom**

enthusiasm and creativity in teaching, inspiring and motivating students, interesting lessons

- **Sharing knowledge and experience with colleagues in schools and organizing events in the regions**

- meetings in Katowice University
- conference in Puławy 29/02 – 1/03 2008
- many lectures for students and teachers outside school
- exhibitions, competitions, local conferences
- articles in newspapers, radio and TV broadcast

Follow-up activities

- **Cooperation with Polish and European science centres**
 - numerous follow-up visits to IPJ Świerk, IFJ Kraków, Max-Planck-Institute, Greifswald, Germany
 - educational project for teachers in IFPiLM, Warszawa (cooperation with EFDA) - over 80 participants
- **Future plan** - establishing a national network of Physics teachers for long-term cooperation

**Thank you for your
attention**



Helena Howaniec