



**INTERNATIONAL  
MASTERCLASSES**

hands on particle physics



## **HIGH SCHOOL STUDENTS DISCOVER THE WORLD OF PARTICLE PHYSICS**

Each year more than 13.000 high school students in 52 countries come to one of about 200 universities or research centres for one day in order to unravel the mysteries of particle physics.

**Are you interested in joining?**

Contact for CERN: [uta.bilow@tu-dresden.de](mailto:uta.bilow@tu-dresden.de)

Contact for Fermilab: [Kenneth.W.Cecire.1@nd.edu](mailto:Kenneth.W.Cecire.1@nd.edu)

**FOR 15- TO 19-YEAR  
OLD STUDENTS**

**HELD AT  
UNIVERSITIES AND  
RESEARCH LABS  
WORLDWIDE**

**ORGANIZED EVERY  
YEAR IN  
MARCH/APRIL**

**DURATION: 1 DAY**

**FREE OF CHARGE**



**"The  
Masterclass  
was an  
incredible  
experience for  
me because it  
makes "real"  
particle  
physics  
accessible to  
even high  
school  
students."**

**MORGAN LOGSDON,**

**STUDENT (GRADE 11)  
MILLS E. GODWIN HIGH  
SCHOOL, VIRGINIA, USA**

## **MASTERCLASS DAY:**

- Introduction to particle physics.
- Tour of facilities/lab.
- Lunch with physicists.
- LHC data analysis (measurement activity)
- Discussions of results.
- Video conference for discussion and combination of results between the institutes and moderators at CERN or Fermilab.

## **STUDENTS WILL:**

- Go to a nearby university or research centre.
- Learn about basic research on matter and forces.
- Perform measurements on real data from particle physics experiments at CERN.
- Participate in an international video conference to discuss results.

## **WE PROVIDE:**

- Step-by-step guide for preparation.
- Example lectures.
- Information on the measurements.
- A manual for the video conference.
- Corporate material (logos, poster, invitation letters, participation certificates).
- Press release template.