

Press Release

Nicosia, February 2, 2018

## **Masterclasses Introduce High School Students to Particle Physics**

*Worldwide program opens the window of cutting-edge physics to young investigators*

**The Department of Physics at the University of Cyprus is hosting a masterclass in particle physics on Wednesday March 14, and has invited 60 high school students to participate. These students will take a day off from school to go to the Department of Physics at the University of Cyprus and dive into the actual data. Scientists will introduce them to the tiniest building blocks of the universe and to the accelerators and detectors, which probe these mysterious particles. By analyzing real data from experiments at CERN's Large Hadron Collider, or LHC, students get a taste of how modern physics research works. F. Ptochos, professor of particle physics at the University of Cyprus working on the CMS experiment at LHC is looking forward to the event: "This the 5<sup>th</sup> year, the Department of Physics is organizing this events and the students are very enthusiastic about the program. They enjoy to interact with professional scientists and to work with real data from the LHC."**

Particle physics is one of the most important emerging fields in science. The discovery of the Higgs boson at the LHC in summer 2012 led to a large public interest in understanding particle physics. In a daylong Masterclass, high school students can explore this field of cutting-edge physics by working with authentic data from experiments at the LHC under the supervision of physicists.

The basic idea of the program is to let students work as much as possible like real scientists. Four experiments - ATLAS, CMS, ALICE, and LHCb - have made data available for educational use within the program. "During the day students understand how a scientific discovery can be claimed," prof. Ptochos points out.

At the end of each Masterclass, students will connect in a videoconference with physicists at CERN and other student groups from around the world to discuss their results. "In our collaboration there are thousands of scientists across the world working on the same experiment," says prof. Ptochos. "This requires constant communication via videoconferencing. Students can explore this real scientific working environment in the Masterclass."

The Masterclass at the University of Cyprus is part of an annual program called *International Masterclasses*. Scientists at about 210 universities and laboratories host Masterclasses at their home institutions. The Masterclasses this year are organized for February 15 through March 28 in more than 50 countries worldwide. The worldwide participation reflects the international collaboration in particle physics.

*International Masterclasses* are organized by the International Particle Physics Outreach Group (IPPOG). IPPOG is an independent group of outreach representatives from countries involved in the research at CERN and other leading research laboratories. The group's goal is to make particle physics more accessible to the public.

**For further information:**

**International Masterclasses:** [www.physicsmasterclasses.org](http://www.physicsmasterclasses.org)

**Schedule** (videoconferences with CERN):

[www.physicsmasterclasses.org/index.php?cat=schedule](http://www.physicsmasterclasses.org/index.php?cat=schedule)

**Contact:** [http://www.physicsmasterclasses.org/index.php?cat=country&page=cy\\_nicosia](http://www.physicsmasterclasses.org/index.php?cat=country&page=cy_nicosia)

**Local contact:**

F. Ptochos