

European astroparticle physicists to celebrate 100 years of cosmic ray experiments

October 2 2009

From 10 to 17 October 2009, in France, Italy, Spain and many other countries, astroparticle physicists will meet the public to reveal some of the most exciting mysteries of the Universe. Within the first European Week of Astroparticle Physics, they will organise about 50 events all over Europe: open days, talks for the general public, exhibitions...

The first precursor experiments discovered cosmic ray radiation about a century ago. From 1909 to 1911, physicist Theodor Wulf tried to measure differences of radiation at different altitudes from the Netherlands to Switzerland, and even on top of the Eiffel Tower. In 1912, Victor Franz Hess measured a significant increase of radiation using a balloon for his experiments, flying up to 5000 meters. He was awarded the [Nobel Prize](#) for "his discovery of cosmic radiation" in 1936.

Paris will honour astroparticle physics pioneers at the Montparnasse Tower—the highest building in Paris—which will become a real cosmic rays detector during the entire week. It will welcome the public for animations and meetings with scientists. At night a [laser beam](#) will link the ancient Paris Observatory and the Montparnasse Tower, flashing in synchronisation with the detection of cosmic rays.

In Czech Republic, The Netherlands, Poland, Romania... laboratories will open their doors or organise special events where physicists will meet the public.

Rome will celebrate astroparticle physics with opening on 27 October

2009 in Palazzo delle Esposizioni a large exhibition dedicated to astroparticle physics: "Astri e particelle. Le parole dell' Universo". It is the very first exhibition of this kind in Europe, highlighting challenges and techniques of astroparticle physics, a truly new astronomy.

New astronomy

While the roots of astroparticle physics date back one century ago, it has been developing strongly on the last 30 years, opening new windows to the Universe. Astroparticle physics aims to answer fundamental questions such as "What is [dark matter](#)?", "What is the origin of cosmic rays?" or "What is the nature of gravity?". In underground laboratories or with specially designed telescopes, antennas and satellite experiments, astroparticle physicists employ new detection methods to hunt a wide range of cosmic particles, such as neutrinos, gamma rays, and cosmic rays.

Cosmic rays are tiny particles coming from Space. Created in the core of stars and other cosmic bodies, they reach the Earth, providing a lot of information about their sources and the Universe. Physicists and astronomers think that the [cosmic rays](#) of the highest energies come from the most violent phenomena in the Universe such as supernova explosions and black holes.

More information: Find here the programme of the European Week of astroparticle physics: europeanweek.astroparticle.org

Source: CERN

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