Press Release

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2015 EPS Edison Volta Prize

The European Physical Society (EPS), the Centro di Cultura Scientifica Alessandro Volta and Edison S.p.A. are delighted to announce the award of the 2015 EPS Edison Volta Prize for outstanding contributions to physics to the three principal scientific leaders of the European Space Agency's (ESA) Planck Mission:

Nazzareno Mandolesi, University of Ferrara
Jean-Loup Puget, Institut d'Astrophysique Spatiale, Université Paris Sud and CNRS
Jan Tauber, Directorate of Science and Robotic Exploration, European Space Agency

for "directing the development of the Planck payload and the analysis of its data, resulting in the refinement of our knowledge of the temperature fluctuations in the Cosmic Microwave Background as a vastly improved tool for doing precision cosmology at unprecedented levels of accuracy, and consolidating our understanding of the very early universe."

John Dudley, the EPS President adds: "We are extremely proud to see the pioneering work of the Planck Mission honoured by the EPS Edison Volta Prize. This is especially appropriate given that this year 2015 is declared by the United Nations the International Year of Light, with the UN resolution in fact citing the first discovery of the cosmic microwave background in 1965 as one of the focal points of celebration during the year."

The EPS Edison Volta Prize will be awarded at two ceremonies, one during the EPS Council in March 2015 and another later in the year at the Headquarters of Edison S.p.A. in Italy.

About the Planck Mission

Planck was developed by the European Space Agency as Europe's first mission to study the relic radiation from the Big Bang – the Cosmic Microwave Background (CMB). The instruments on the Planck spacecraft measured the temperature variations across this microwave background with much better sensitivity, angular resolution and frequency range than any previous satellite. The combination of these factors gives astronomers an unprecedented view of the Universe when it was extremely young: just 380 000 years old.

The interpretation of the spatial distribution of the temperature fluctuations in the CMB leads to a model describing the evolution of the Universe and the formation of structures such as galaxies and clusters of galaxies. The mission – named after the German physicist Max Planck, whose work on the behaviour of radiation won him the Nobel Prize in 1918 – actually investigates the radiation released into the Universe by the Big Bang itself, about 13.8 thousand million years ago. What was once a searing fireball has in the meantime cooled to become a background sea of microwaves.

The high accuracy of Planck's measurements of the Cosmic Microwave Background permits to determine the fundamental characteristics of the Universe, such as the overall geometry of space, the density of normal matter and the rate at which the Universe is expanding. It also allows to test whether any "exotic" physics might be present in the Universe.

The difficult-to-extract properties of the polarisation of the Cosmic Microwave Background are about to be published. These faint signals allow to cross-check and improve the model obtained from the temperature fluctuations. In addition, they will perhaps provide the most exciting Planck results: they provide a test of whether the Universe passed through a period of rapidly accelerated expansion just after the Big Bang – a phenomenon called 'inflation' by astronomers.

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EPS Edison-Volta Prize

The EPS Edison Volta Prize promotes excellence in research and is given in recognition of outstanding research and achievements in physics. The EPS Edison Volta Prize is given biennially to individuals or groups of up to three people. The laureates receive a medal, which is a faithful reproduction of the “Medaglia Premio dell’ Associa-zione per l’Incremento del Commercio in Como": a portrait of Alessandro Volta together with the saying: Alexandro Voltae Novocomensi, i.e. (dedicated) to Alessandro Volta from Novum Comum, which was the old name given to the city of Como by Julius Caesar.

The Prize was established in 2011 and was awarded for the first time in 2012 to R. D. Heuer, S. Bertolucci and S. Myers and to J.-M. Raimond in 2014.

Background Information

The European Physical Society (EPS) provides an international forum for physicists and acts as a federation of 42 national physical societies. Founded in 1968, the EPS now has around 4000 individual members, and it Members Societies represent together over 100,000 physicists. More info: www.eps.org

The other partners and sponsors of the Prize are Edison S.p.A. (www.edison.it) and the Centro di Cultura Scientifica "Alessandro Volta" (www.centrovolta.it).