Specjalne Seminarium Astrofizyczne

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Hoża 69, pawilon sala **22**

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The future of the CMB: from temperature to polarization

The ESA Planck space mission has fully exploited the cosmological information available in Cosmic Microwave Background temperature anisotropies. A standard cosmological model has emerged. Our Universe, however, remains a mystery. What are the invisible matter and energy that seem to constitute 96% of our universe? Did the Universe truly begin with an superluminal expansion that stretched quantum fluctuations to cosmological scales to generate the initial perturbations that eventually gave raise to galaxies, starts, and ultimately ourselves?

In this talk, I will review the theoretical motivations for digging even further in the CMB, and in particular to accurately measure the properties of CMB polarization with a future Cosmic Origins Explorer space mission, to probe physics ranging from the absolute mass of all neutrino species to grand unification physics at an energy scale thousand billion times bigger than that of the LHC.

Serdecznie zapraszam,

Agnieszka Majczyna