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国台学术报告 NAOC COLLOQUIUM

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Time: Wednesday 2:30 PM, Mar. 8st Location: A601 NAOC

Euclid and the Dark Universe

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Professor Yannick Mellier obtained his Ph.D degree on astrophysics from Toulouse, France in 1997, and moved to IAP in 1996. Now he is responsible of the gravitational lensing team there, he works as the PI of the Descart project and the TERAPIX data center, and he is the leader of EUCLID Mission of ESA. His research interest mainly focuses on cosmology and large-scale structure of the universe, strong and weak gravitational lensing and the dark universe.

Abstract

Euclid is an M-class space mission of the European Space Agency selected by the Agency in October 2011. Euclid aims at understanding the origin of the accelerating expansion of the Universe by observing the signatures of dark energy, modified gravity and dark matter on the expansion history and the growth rate of cosmic structure. Euclid will use 5 complementary and independent cosmological probes: weak gravitational lensing, baryon acoustic oscillations, redshift-space distortion, clusters of galaxies and integrated Sachs-Wolf effect. The payload module will be composed of a 1.2 meter telescope that will feed a wide field high image quality visible imager and a field field near-infrared photometer and spectrometer. The instruments will measure the shapes of about 1.5 billion galaxies and redshifts of several tens of millions galaxies observed over the whole darkest extragalactic sky (15,000 square degrees). The Euclid mission will also have a considerable legacy value for the whole astronomical community in many fields of astrophysics. During this colloquium I will present the mission and its scientific objectives and will show its performance and capability to pin down the properties and the history of the dark universe.

All are welcome! Tea, coffee, biscuits will be served at 2:15 PM.