

CASTLE

Cosmological and Astrophysical Synergies: Tactics for the Latest Era

Manifesto

A new era for cosmology has come: in the very near future, a new generation of experiments will push our gaze at the Universe deeper than ever, carrying out observations across the whole electromagnetic spectrum—not to speak of the new ‘ear’ just opened by gravitational-wave astronomy. Satellites, surveys and telescopes such as the SKA, Stage IV CMB experiments, Euclid, DESI, LSST, e-ROSITA, Athena+, e-ASTROGAM, CTA, and Advanced LIGO/VIRGO and LISA will soon provide us with data of unparalleled accuracy. This represents a change of paradigm with respect to the way cosmological data has been collected and analysed so far. In particular, this will open unprecedented opportunities best to exploit synergies among the most varied cosmological and astrophysical observables. This is how CASTLE sees the light of day, as a chance to bring together scientists interested in exploiting such new synergies, with an aim at planning the strategy for the new era.

Scientific board

Stefano Camera, Chair (*Università degli Studi di Torino, Italy*)
David Bacon (*Institute of Cosmology & Gravitation, UK*)
Jens Chluba (*The University of Manchester, UK*)
Tamara Davis (*University of Queensland, Australia*)
Antonaldo Diaferio (*Università degli Studi di Torino Italy*)
Silvia Galli (*Institute d’Astrophysique de Paris, France*)
Luigi Guzzo (*Università degli Studi di Milano, Italy*)
Mário Santos (*University of the Western Cape, South Africa*)

Proposed invited reviews & speakers

Cosmology with radio surveys (*R. Maartens – UWC, South Africa*)
Cosmology with imaging surveys (*A. Heavens – Imperial, UK*)
Cosmology with spectroscopic surveys (*Ben Granett – INAF OABrera, Italy*)
Cosmology with X-ray surveys (*A. Merloni – MPE, Germany*)
High-energy cosmology (*N. Fornengo – Turin U., Italy*)
Gravitational wave cosmology (*TBC*)

Dates & venue

9th-12th September 2018, Tagliolo Monferrato, Italy



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