ASTRO@TS 2015

SISSA June, 3-4 2015

Wed. June 3, 2015

9:30 – 9:40 *Welcome*

Chair Paolo Salucci

Cosmology with Galaxies and the CMB

9:40 – 10:00 Castorina (SISSA) *Cosmology with Large Scale Structures: from dark matter to halos and galaxies*

10:00 – 10:20 Paci (SISSA) *Cosmology with the CMB*

10:20 – 10:30 Massara (SISSA) *Modelling the Large Scale Structure in massive neutrino cosmologies*

10:30 – 10:40 Shi (SISSA) *Flow Patterns around Dark Matter Halos: the Link between Halo Dynamical Properties and Large Scale Tidal Field*

10:40 - 10:50 Bianchini (SISSA) *Cross-correlation in the high-redshift sky: the Planck and Herschel case*

10:50 – 11:00 Irsic (ICTP) *Large-scale effects of the Lyman-alpha forest*

11:00-11:30 Coffee Break

Chair Andrea Lapi

Chemical Evolution and Stars

11:30 – 11:50 Vincenzo (UniTs) *Chemical evolution of galaxies: state of the art*

11:50 – 12:10 Fu (SISSA) *Lithium evolution in metal-poor stars: from Pre-Main Sequence to the Spite plateau*

12:10 – 12:20 Spitoni (UniTs) *The effects of the stellar migration and environment on the chemical evolution of galaxies*

12:20 – 12:30 Trani (SISSA) *Kozai-induced precession in the Galactic Centre*

12:30 – 12:40 Obi (SISSA) Thermal and non-thermal radio emission in young star forming metal poor galaxies

12:40 – 12:50 Vladilo (OATs) *Planetary habitability*

12:50 – 14:20 Lunch Break

Chair Andrea De Simone

Dark Matter

14:20 – 14:40 Karukes (SISSA) *Dark Matter density distribution in galaxies*

14:40 – 14:50 Valli (SISSA) *On the robustness of Dark Matter limits from dwarf spheroidal galaxies*

14:50 – 15:00 Busoni (SISSA) *Review of Dark Matter searches and EFT validity at LHC*

15:00 – 15:10 Carucci (SISSA) *The imprint of warm dark matter on the 21cm power spectrum: forecasts for SKA*

General Relativity

15:10 – 15:30 Mohd (SISSA) *Emergent gravity*

15:30 – 15:40 Belenchia (SISSA) *Causal-set's non locality*

15:40 – 15:50 Di Dio (OATs) *Relativistic effects on galaxy clustering*

15:50 – 16:00 Raveri (SISSA) *Observational implications of the Effective Field Theory approach to dark energy and modified gravity*

16:00 – 16:30 Coffee Break

Chair Valentina D'Odorico

Future Observations

16:30 – 16:40 Romelli (UniTs) *End-to_End simulations for Euclid: redshift and persistence*

16:40 – 16:50 Tavagnacco (UniTs) *Observing the sky from the South Pole*

16:50 – 17:00 Cupani (OATs) *The age of precision spectroscopy: from ESPRESSO@VLT to HIRES@E-ELT*
17:00 – 17:10 Fabiani (INFN) *The LOFT mission*

17:10 – 18:00 **General Discussion**

Thur. June 4, 2015

Chair Pierluigi Monaco
Galaxy Formation and Inter-Galactic Medium
9:30 – 9:50 Fontanot (OATs) *A theoretical perspective on the problem of galaxy evolution*
9:50 – 10:00 Mancuso (SISSA) *Radio emission to trace the star formation rate with SKA*
10:00 – 10:10 Aversa (SISSA) *Black hole and galaxy co-evolution*
10:10 – 10:20 Xie (OATs) *Implementing H2-based star formation laws in semi-analytic galaxy formation model*

10:20 – 10:40 Barai (OATs) *Gas outflows in cosmological hydrodynamical simulations*
10:40 – 10:50 Mongardi (UniTs) *IGM with hydrodynamical simulations*
10:50 – 11:00 Perrotta (SISSA) *Occurrence and global properties of narrow associated absorption lines in the XQ-100 Legacy Survey*

11:00 – 11:30 Coffee Break

Chair Mirko Boezio
High Energy Astrophysics
11:30 - 11:50 Longo (UniTs/INFN) *High-energy astrophysics with cosmic rays and high-energy gamma rays*
11:50 – 12:00 Desiante (UniUd/INFN) *Solar Flares observations with Fermi experiment*
12:00 – 12:10 Berti (UniTs/INFN) *Search for high-energy emission from GRB with MAGIC experiment*
12:10 – 12:20 Munini (UniTs/INFN) *Solar modulation of galactic cosmic rays with the PAMELA experiment*
12:20 – 12:30 Karuza (INFN) *Experiments beyond the Standard Model*
12:30 – 12:40 Nafooshe (NG) *Black Hole story*

12:40 – 14:20 Lunch Break

Chair Andrea Biviano
Galaxy Clusters
14:20 – 14:40 Rasia (OATs) *Observational analysis of simulated clusters of galaxies*
14:40 – 15:00 Sartoris (UniTs) *Galaxy clusters: the crossroads between cosmology and astrophysics*
15:00 – 15:10 Biffi (UniTs) *Hydro-simulations of galaxy clusters: ICM properties*
15:10 – 15:20 Annunziatella (UniTs) *The evolution of galaxies in clusters at intermediate redshift. How environmental processes affect the galaxy stellar mass function*
15:20 – 15:30 Farrens (OATs) *A 480s breakdown of clusters in the context of Euclid*

15:30 – 16:00 **General Discussion**

NG = University of Nova Gorica