

PROGRAM OF THE CONFERENCE COSMOLOGY ON SMALL SCALES 2024

Thursday, September 19

8:00–9:00 Registration

9:00–9:10 **Michal Krížek**, Opening

Chair: Pavel Kroupa

9:10–10:00 **Xavier Hernandez**, On the consistency of the GAIA Wide Binary Gravitational Anomaly with MOND

10:00–10:30 Coffee Break

10:30–11:15 **Tuomo Suntola**, The Dynamic Universe (DU)

11:15–12:00 **Avril Styrman**, Evaluation of theories and methodologies: Relativistic Physics vs. the Dynamic Universe

12:00–14:00 Lunch Break

Chair: Xavier Hernandez

14:00–14:30 **Elena Asencio**, The distribution and morphologies of Fornax Cluster dwarf galaxies suggest they lack dark matter

14:30–15:00 **Pavel Kroupa**, Observational data rule out dark-matter based models

15:00–15:30 **Nikolaos Samaras**, On the initial conditions of the ν HDM cosmological model

15:30–16:00 **Klaus Morawetz**, Cosmology with torsion – time dependent Hubble constant

16:00–16:30 Conference photo – Coffee Break

Chair: Klaus Morawetz

16:30–17:15 **Václav Vavryčuk**, On the existence of the event horizon around black holes

17:15–17:35 **Atinc Cagan Sengul**, Finding and measuring low mass dark matter halos with strong gravitational lensing

17:35–18:00 **Michal Krížek**, A few critical remarks on the special theory of relativity

Friday, September 20

Chair: Tuomo Suntola

9:00–9:30 **Petri Lievonen**, Hyperspherical models of the universe: supernova observations, pulsar timescales, and concise mathematical ideas of Suntola

9:30–10:00 **Juan De Vicente**, Static interpretation of FLRW metric

10:00–10:30 **Harry Desmond**, Tests of gravity within and beyond the Galaxy (ZOOM presentation)

10:30–11:00 Coffee Break

Chair: Petri Lievonen

11:00–11:20 **Anastasiia Lazutkina**, LCDM and MOND: prediction and explanation in cosmology

11:20–11:40 **Tomáš Ondro**, Lognormal seminumerical simulations of the Lyman α forest

11:40–12:00 **Michal Křížek**, JWST suggests a positive curvature of our universe due to the Spacetime-Lens Principle

12:00–13:45 Lunch Break

Chair: Ivan Gudoshnikov

13:45–14:30 **Martín López-Corredoira**, Hubble (non-)tension and high- z galaxies older than Λ CDM Universe (ZOOM presentation)

14:30–15:00 **Yurii V. Dumin, Elizaveta G. Khramova**, Solution of the faint young Sun paradox: Greenhouse effect vs. the local Hubble expansion (ZOOM presentation)

15:00–15:30 **Vyacheslav I. Dokuchaev**, Searching indications for dark energy in the images of black holes (ZOOM presentation)

15:30–16:00 **Ivan L. Zhogin**, Cosmology with one extra dimension (ZOOM presentation)

16:00–16:30 Coffee Break

Chair: Avril Styrman

16:30–16:50 **Artyom Valerievich Astashenok**, Evolution of perturbations in the holographic dark energy model and observational data (ZOOM presentation)

16:50–17:10 **Yurii V. Dumin**, Can the quasi-oscillatory structure of low multipoles in the CMB spectrum be associated with the domain structure of vacuum? (ZOOM presentation)

17:10–17:30 **Aleksandr Sergeevich Tepliakov**, Holographic dark energy: models and observational data (ZOOM presentation)

17:30–17:50 **Yash-Hemu Aggarwal**, Solving the enigma of the origins and growth of supermassive black holes (ZOOM presentation)

17:50–18:20 **Itzhak Goldman**, Gas accretion onto galaxies and Kelvin-Helmholtz turbulence (ZOOM presentation)

18:20–18:40 **Lyndon Errol Ashmore**, Data from twenty-three localised FRB's confirm the predictions of New Tired Light and that the universe is static and not expanding (ZOOM presentation)

18:40–19:00 **Mustafa Moumni**, Solving Friedman equation for non-flat universe with both minimal and maximal lengths (ZOOM presentation)

Saturday, September 21

9:00–12:00 Excursion through astronomical and cosmological sites of Prague guided by **Michal Křížek** (total length about 6 km):

In the footsteps of Johannes Kepler and Albert Einstein in Prague

We will meet at 9:00 in front of the main gate of the Institute of Mathematics at Žitná 25. **Please, don't forget your umbrellas!!!**