

Seminarium Astrofizyczne

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Scale invariance at low accelerations (MOND) as an alternative to dark matter

Galactic systems and the Universe at large exhibit significant anomalies when analysed within Newtonian dynamics and general relativity: Large discrepancies are found between the gravitational masses required by the observed dynamics, and the masses we actually observe in these systems. The mainstream explanation of these anomalies invokes the dominant and ubiquitous presence of “dark matter”. The "MOND" paradigm suggests, instead, that the discrepancies are due to breakdown of standard dynamics in the limit of low accelerations, where MOND dynamics are space-time scale invariant. MOND accounts for many detailed manifestations of the mass discrepancies with no need for dark matter. I will outline the paradigm, some of its achievements, and some remaining problems and desiderata.

Serdecznie zapraszam,
Agnieszka Majczyna