

GR 12: Foundations and Alternatives III

Time: Wednesday 15:45–17:05

Location: HBR 14: HS 3

GR 12.1 Wed 15:45 HBR 14: HS 3

No Need for Dark Energy in a Variable Speed of Light Cosmology? — ●ALEXANDER UNZICKER — Pestalozzi-Gymnasium München

Einstein's very first idea concerning general relativity in 1911, based on a variable speed of light, can be extended to a cosmology that implements Mach's principle (Dicke, 1957). Its predictions are compared to supernova data from the Open Astronomy Catalog (API).

GR 12.2 Wed 16:05 HBR 14: HS 3

Solving the Conundrum of Dark Matter and Dark Energy — ●THOMAS WÄSCHER — Von-Dalheim-Str. 2, 69231 Rauenberg

As a Follow-Up on the talk at the DPD-Frühjahrstagung Heidelberg 2022 "Theses for a Closed, Self Sustaining and Timeless Universe" I try now to explain how "Dark Matter" and "Dark Energy" can be mutually neutralized without any residues. It starts from the ground by a wording of Ernst Schmutzer, Jena: "Acceleration replaces Gravity" and vice versa in the field of the Equivalence Principle (EP). Applied e.g. to the measurements of Riess et al. and Perlmutter et al. (1998), who identified the growing redshift as an accelerated expansion of the universe this would imply that they may have detected the growing redshift in a constant gravitational field instead. The very meaning of the EP is that all measurements of redshift in an isotropic and homogenous environment of accelerated expansion cannot be distinguished by no means from the redshift measurements made in a stationary gravitational field. Now exchanging the accelerated expansion by a stationary gravitational field, "Dark Energy" is omitted and instead the gravitational field delivers "Dark Matter". These considerations favour a stable, gravitationally closed, adiabatic and timeless universe with internal dynamic processes of fusion and decay of the elements in a state of equilibrium. Surprising $z > 10$ JWST observations hint to this prospect, e.g. the existence of metal elements or the fully developed galaxies far away.

GR 12.3 Wed 16:25 HBR 14: HS 3

Mögliche physikalische Ursachen der kosmischen Raumausdehnung — ●HERBERT HÖFT — Rilkestraße 29, 09114 Chemnitz

Für die Kosmologie gilt auch im weiten Universum: Homogenität des Raumes *(Wahl des Startortes spielt keine Rolle,)

Isotropie des Raumes **(Richtung im Raum spielt keine Rolle) Die physikalischen Erhaltungsgesetze gelten überall. Aktuell glaubt man, dass eine angenommene Dunkle Energie den Kosmos auseinander

treibt.

Für ein Kugelmodell des Kosmos (als der beobachtbare Teil des unendlichen Universum) bestimmen die nicht abschirmbare anziehende Gravitationskraft $F_A = GmM/r^2 = Gm4\pi\delta r/3$ der kosmoschen Masse $M = \delta V = 4\pi\delta r^3/3$ und die Fliehkraft durch Rotation $F_F = m\omega^2 r$ das wesentliche Geschehen im Kosmos.

Alles bewegt sich und rotiert das Elektron (Spin) und die Galaxien mit einer Rotationsachse, die sich auch durch äußere Einwirkungen neigen kann was bei einigen Galaxien durch die Absenkung der äußeren Spiralarme sichtbar ist und bei unserer Milchstraße vermutet wird. Falls die angenommene Kosmoskugel mit einer Winkelgeschwindigkeit ω rotiert, folgt aus der Differenz $\Delta F = F_F - F_A$ ein Gleichgewicht bei $\omega^2 = 4\pi\delta G$. Das ist der statische Zustand der Raumausdehnung und mit $\omega > (4\pi\delta G)^{1/2}$ folgt eine Raumausdehnung. Eine Dunkle Energie ist dazu nicht notwendig. Vielleicht gelingt es in Zukunft in einem kosmischen Lagrange-Punkt ein rotierendes Gebilde mit einer stabilen Rotationsachse zu installieren und die Rotation des Kosmos nachzuweisen.

GR 12.4 Wed 16:45 HBR 14: HS 3

A multiversal view of reality — ●ROLAND SCHMIDT — 34225 Bauatal, Deutschland

Quantum mechanics is complemented by an inertia operator. Based on this, it can be shown that the equivalence principle of the general theory of relativity is invalid. This inadequacy results from an as yet overlooked incompleteness of classical electrodynamics. Obviously, an observation can only arise from cerebrally attached electromagnetic interactions, in which a perceiving observer is involved as a realizing instance. However, as far as the process of observation is concerned, classical electrodynamics does not distinguish sufficiently between cerebrally attached and cerebrally detached electromagnetism. In particular, it cannot be explained on an exclusively classical basis how light that reaches the spatial presence of an observer finally also penetrates into the observer's cerebral presence, so that an experienced sensory impression is realized within the observer's cerebral apparatus. The interaction of light with the observer's intra-cerebral presence can only be explained on the basis of quantum theory. With this background, it is shown that no objectively valid universe is realized at all. Actually, a multiverse of cerebrally established realities takes place instead of a single universally valid reality. To put it plagatively: The cerebral apparatuses of the observers do not occur in reality, but realities occur in the cerebral apparatuses of the observers.