

Heretical Discoveries and Corrections to General Relativity Theory

Jaroslav Hynecek

Introduction: As my hobby and having a long time dormant interest in Special and General Relativities I have decided in 2004 to start looking into these topics in more detail and most of all to satisfy my curiosity. The main problem and irritation were the claims of existence of Black Holes with Event Horizons and generally the claims that the Big Bang formed the universe we are living in. These claims seemed to me totally absurd and preposterous. The described study addresses these points, it does not follow the main stream theory, rather it is based on the engineering approach and a philosophy that the results must be reasonable and most of all supported by experimental test results, observations, or at least by thought experiments without contradictions. I have thus started to look closely into the Special Relativity Theory (SRT) and gradually progressed towards the General Relativity Theory (GRT) and finally to the alternate model of the universe as is outlined in the step by step fashion below. Each point and the accompanied statements are therefore documented in detail by referenced publications, which in most cases were refereed, and can be easily accessed by the included internet links.

1. The Special Relativity Theory (SRT) seems to be correct with one exception that the **gravitational mass depends on velocity differently than the inertial mass** in such a way that their product forms an invariant, independent of velocity. This finding is fundamentally new, not found anywhere in the published literature, with a significant consequence that photons cannot be attracted by gravity: <http://gsjournal.net/Science-Journals/Research%20Papers-Relativity%20Theory/Download/1507>
<http://redshift.vif.com/JournalFiles/V16NO1PDF/N16N1HYN.pdf>
2. The **correct resolution of Ehrenfest paradox was obtained** by using this difference in the mass velocity dependence and it was shown that the centrifugal inertial force cancels the SRT effects on rotating platforms. This result was confirmed by analyzing the transversal Fizeau effect and by the GPS in satellite clock tests. The clock rate is therefore the same everywhere on the surface of Earth. <http://gsjournal.net/Science-Journals/Essays/View/1498>
3. The **new metric for a centrally gravitating body was derived** and its correctness confirmed by showing that the metric satisfies the GRT tests: the Mercury perihelion advance, the Shapiro delay, the light bending by gravity, and the gravitational redshift. It was also found that the mass of our Sun is slightly underestimated, which is important for calculation of interplanetary probe trajectories. <http://www.ccsenet.org/journal/index.php/apr/article/viewFile/19106/13794>
4. The new metric allowed deriving the **correct relativistic Kepler's third law for circular orbits**. This is in a sharp contrast with the GRT where the Schwarzschild metric leads to the Kepler's third law that is identical with the same formula derived from the Newtonian physics, which is valid only in flat spacetime geometry. How strange is that? <http://www.highbeam.com/doc/1G1-238178327.html>
5. The **new metric does not predict the existence of Black Holes with Event Horizons**, which has been recently also questioned by Stephen Hawking. The new metric predicts the minimum radius to which any mass can be compacted to, can be always seen, and permits ejection of galaxy central mass jets. <http://www.highbeam.com/doc/1G1-258052469.html>
6. It was shown that the formula for **the light bending effect by the centrally gravitating body is not derived correctly in GRT** and that the GRT formula derivation is an unbelievable scientific fraud. <http://gsjournal.net/Science-Journals/Essays/View/1508>

7. Similar finding was made related to the geodetic precession. **The GRT derivation of geodetic precession is not correct** and the error is purposely included in the derivation and covered up to obtain an agreement with the measurement results of Gravity Probe B tests.
<http://gsjournal.net/Science-Journals/Essays/View/5135>
8. It was shown by simple thought experiment that the frame dragging effect and thus the **Gravitomagnetism cannot exist** if SRT is considered a correct theory corresponding to reality.
<http://gsjournal.net/Science-Journals/Essays/View/5269>
9. The new metric allows studying the spacetime properties within a sphere bounded by the Schwarzschild radius (in the interior of purported Black Holes). This allowed explaining the **variations in isotope decay rates that correlate well with the Earth-Sun distance**.
<http://ccsenet.org/journal/index.php/apr/search/results> (enter the search term "Hynecek")
10. The new metric was also applied to model the universe and it was confirmed that the universe is not expanding, it is finite in space and infinite in time, and that the GRBs are generated by explosions of galaxies (galactic central masses) as they approach the outer border region of the universe. The model further allowed deriving the formula for **calculation of the duration of long GRB explosions**.
<http://www.highbeam.com/Search?FilterByPublicationID=436947&FilterByPublicationName=Physics+Essays&searchTerm=hynecek>
11. It was shown that **the Big Bang is a myth** and that the CMB is the radiation generated near the border of the universe as a remnant of the galaxies' explosions (similar to the firewall effect). There is no spacetime outside of the finite universe sphere; therefore, there is no "beyond". This is actually where the real Black Hole of the universe is. <http://www.highbeam.com/doc/1G1-336604030.html>
12. From the finite and curved model of the universe it was possible to derive the **dependence of Hubble constant on the temperature of the CMB**, calculate its precise value, and derive many other interesting relations. The spacetime is a material entity, dark matter, or rediscovered aether supporting the propagation of light as the transversal waves and the gravity as the longitudinal waves, both propagating with the same velocity c .
<http://gsjournal.net/Science-Journals-Papers/Author/201/Jaroslav,%20Hynecek>

Conclusions: SRT is a theory that correctly describes the reality when applied to inertial systems without acceleration with the exception of different gravitational mass dependence on velocity than the inertial mass dependence on velocity. The GRT correctly describes the gravity as a deformation of spacetime, but is using the wrong Schwarzschild metric for that. There are no Black Holes, only very compact and massive observable objects without Event Horizons. The universe is a finite enclosed region of space with the spacetime being a deformable material entity. The universe border region generates the CMB. The receding galaxies float in this spacetime and explode at the outer edge of the universe when they encounter the CMB firewall. The explosions generate the immense gamma ray bursts, which are then reflected back to the universe bulk where they contribute to the generation of new mass, new stars, and eventually new galaxies. There is no time of the universe origin (creation) that can be identified from the current observations. **There is no spacetime beyond the edge of the universe only darkness and nothing.**