

# Einstein Relativity Disproved.

## Abstract.

Newtonian solution of the many-body problem by demonstrating the existence of a preferred reference frame at absolute rest allows for the determination of really true motion (relative to absolute rest), thus falsifying the hypothetical foundation of Einstein relativity.

I Isaac Newton's famous but little-read "Principia" of 1687/1713/1726 provides in Book I, Corollary IV to the laws of motion, a solution of the many-body problem with far-reaching consequences for theoretical physics of today, so far generally ignored.

Consider a two-body system of billiard-balls A and B revolving about their common center of gravity, C. According to Newton, this center lies on the straight line connecting the centers A and B of the revolving bodies. It divides the straight line AB at a certain point. Provided the bodies A and B have equal weights, their common center of gravity, C, will lie in the middle of the line AB. In this case, the bodies A and B will revolve in one and the same circle with radius  $AB/2$  about C. Note that this truth is often distorted and misrepresented in physics textbooks. Such a misrepresentation can also be seen in the Wikipedia computer simulation of the two-body problem, A and B revolving about their common center of gravity not in one common circle but in different elliptical orbits (which is absurd in the absence of an additional cause to force the bodies into these stretched orbits).

According to Newton's cited Corollary, what holds for two bodies, also holds for a many-body system (n-body system). Newton's Corollary reads:

"The common center of gravity of two or more bodies does not change its state whether of motion or of rest as a result of the actions of the bodies upon one another; and therefore the common center of gravity of all bodies acting upon one another (excluding external actions and impediments) either is at rest or moves uniformly straight forward."

Newton in his explanation to the Corollary shows in detail how the common center of gravity of a many-body system can be determined.

Note that all motions of the many bodies refer to the common center of gravity. Therefore, this center provides the common reference frame of the motions of the moving bodies. It is true that here Newton doesn't show how to distinguish whether or not the reference frame is at rest, or moves itself uniformly in a straight line. But this distinction (inalienable of course for making the reference frame absolute) is disclosed when Newton applies his laws to the natural many-body Solar system. Accordingly, the common center of gravity of the revolving orbs is at absolute rest; and so is the preferred reference frame also at absolute rest.

II Here is a brief history of the investigation of the Solar system since Copernicus.

The center of the Sun does not coincide with the gravitational center of the Solar system (the barycenter). This fact has been known since the time of Copernicus. Actually the Sun orbits the barycenter in a narrow circle. General Relativity (GR) nevertheless sees the Sun's middle as the immovable center. Therefore when applied in calculating Mercury's perihelion precession, GR yields unrealistic results. Moreover, the true Solar system falsifies the relativistic concept of central "black holes".

### 1. Nicolaus Copernicus.

Nicolaus Copernicus in 1543 taught that the center of the Solar system is not the center of the Sun, rather it lies outside, even though quiet near to her<sup>1</sup>. He referred the motions of (Sun and) planets to the true immovable center of the system, the orbits being perfect circles about it. Today this center is called the "barycenter" of the Solar many-body system.

### 2. Johannes Kepler.

Johannes Kepler believed in the Sun being a source and center of instantaneous attraction at a distance. Accordingly he interpreted the measured positions of planets as indicating elliptical orbits ("Kepler ellipses") relative to the attracting Sun, placing her as the center of circulation in one of the ellipse's focuses.

### 3. Galileo Galilei.

Galileo Galilei followed Copernicus. He did not believe in Kepler's hypotheses. When he was falsely accused by the Roman Church of teaching the Sun as immovable center of the world, he rejected this accusation. When the persecutors nevertheless pressed him hard to revoke for not to end as heretic at the stake, he eventually did so, but certainly with a clear conscience, because the mistaken (Keplerian) "central body theory" had never been his.

### 4. Isaac Newton.

Isaac Newton followed Copernicus and Galileo. He showed that every many-body system has a common barycenter<sup>2</sup> relative to which, as a point of reference at true rest<sup>3</sup>, the bodies revolve in perfect concentric circles<sup>4</sup>. Moreover he demonstrated that the cosmic barycenter of the Solar system (as well as of any other cosmic system) is an immovable geometrical point in real space<sup>5</sup>. Thus it provides the preferred immovable reference frame of real motion.

### 5. Urbain Jean Josef Leverrier.

Leverrier believed in Kepler's ellipses. In the second half of the 19<sup>th</sup> century he measured the perihelion precession of Mercury based on the hypothesis of an elliptical orbit of the planet, with the Sun at a focal point. Thus Leverrier obtained measured values that differ significantly from those obtained with Newton's theory.

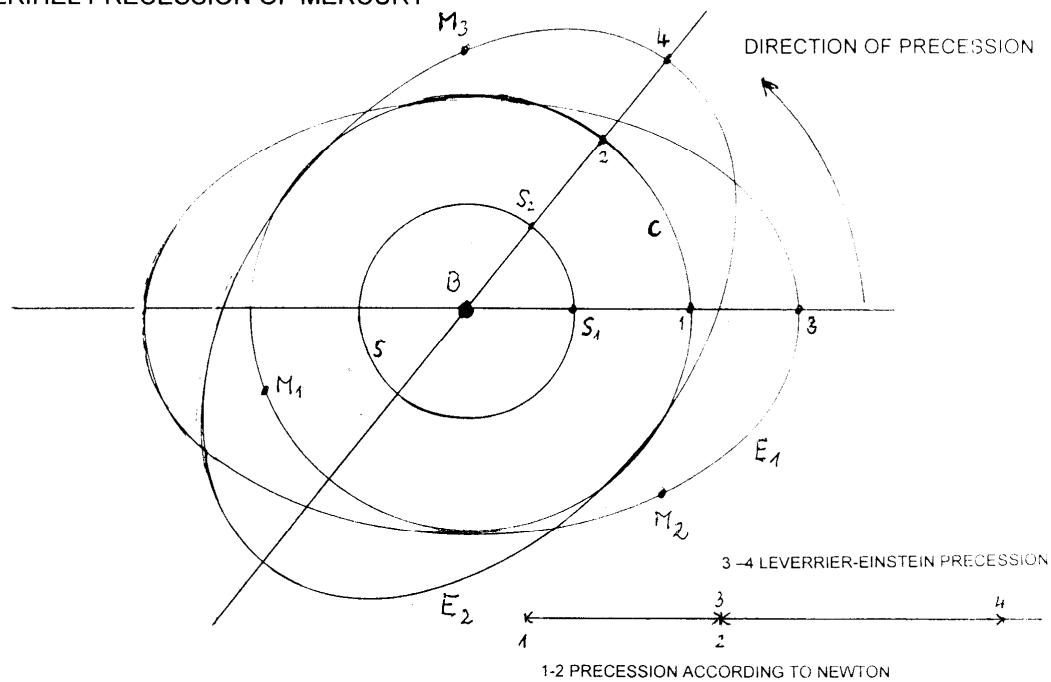
### 6. Albert Einstein.

Albert Einstein followed Leverrier and Kepler, that is, the relativistic concept that puts the Sun as immovable center of gravity in the focus of elliptic orbits. As a consequence he received measured values corresponding with Leverrier's. The astronomers believed in Leverrier's values, since they were derived on the basis of the generally believed "Keplerian ellipses". So Einstein felt encouraged to claim that he had found a better theory than Newton. Since that time, Einstein's theory has been preferred to Newton's, but falsely, as we now see it based on a falsified hypothesis.

## 7. Stephen Hawking.

Steven Hawking as an Einsteinian believes in the cosmic concept of attracting gravitational potentials (curvatures of spacetime) caused by massive central bodies ("black holes"), the potentials urging other bodies to orbit the central body, thus to form the rotating many-body systems called galaxies. But the Solar system, as it shows the center empty, together with Newton's mathematical demonstration that the center of any many-body system (the barycenter) must needs be a nonmaterial point in space, falsifies not only GR, but the black hole hypothesis as well.

PERIHEL PRECESSION OF MERCURY



- B Center (barycenter, immovable rotation center) of the Solar system.
- S Sun's true orbit around B ( Sun positions S<sub>1</sub> and S<sub>2</sub> being focal points of Keplerian ellipses).
- E<sub>1</sub> Keplerian ellipse of Mercury orbiting focal point S<sub>1</sub>
- E<sub>2</sub> Keplerian ellipse of Mercury orbiting focal point S<sub>2</sub> (after Sun has moved from S<sub>1</sub> to S<sub>2</sub>).
- C True circular orbit of Mercury according to Newton.
- M<sub>1</sub> Position of Mercury on its true circular orbit C around B.
- M<sub>2</sub> Position of Mercury on its apparently elliptical orbit E<sub>1</sub> around focal point S<sub>1</sub>
- M<sub>3</sub> Position of Mercury on its apparently elliptical orbit E<sub>2</sub> around focal point S<sub>2</sub>
- 1, 2, 3, 4 Positions of Mercury's perihelion on Mercury's true orbit (1, 2), and on its apparent orbits (3, 4); the precessions 1-2 and 3-4 resulting from the motion of the Sun from S<sub>1</sub> to S<sub>2</sub> :
- 1 – 2 True (real) Newtonian precession of Mercury's perihelion on Mercury's really circular orbit C.
- 3 – 4 Apparent Leverrier/Einstein precession of Mercury's perihelion.

(Drawing not true to scale).

III To sum it up, Newton's theory of the conditions of motion in a many-body system shows (1) that there exists the barycenter as the preferred common reference frame of all the motions of the bodies that form the system, (2) that this barycenter in real infinite space must needs be at absolute rest, and (3) that the precessions of the perihelion of Mercury must correctly be measured on the basis of circular orbits of Mercury *and of the Sun* about the system's barycenter, as shown in the above diagram. This result disproves the relativist's hypotheses that (1) there would exist no preferred reference frame (this is the principle of relativity), that (2) a state of absolute rest could not be determined, and (3) that the precessions of the perihelion of Mercury should be measured relative to the immovable (!) Sun as focal point of an elliptical orbit of mercury about this point. The truth to the contrary is generally known, and therefore relativity is disproved: The Sun does move!

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Notes:

- 1 Nicolaus Copernicus, *De revolutionibus orbium coelestium liber VI*, Book I Chapter 10 (readers should be warned that the original Latin is sometimes mistranslated in English versions as if the center of the Sun would be the center of the system).
  - 2 Isaac Newton, *Philosophiae naturalis principia mathematica*, London 1687/1713/1726, Book I Corol. IV to the laws of motion.
  - 3 Isaac Newton, *Principia* Book III Prop. XII and Corollary.
  - 4 Isaac Newton, *Principia* Book I Prop. IV Corol. 6 and Scholium; Book III Prop. XI, XII and Corollary.
  - 5 Isaac Newton, *Principia* Book I Scholium after Def. 8; Book III Prop. XI, Prop. XII and Corollary.
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