

HERETICAL PHYSICS - A PAPER ON MERCURY'S ORBIT

Abstract

The purpose of this paper is to illustrate that the orbit of Mercury consists of two spheres (of Aether) Where the smaller Aether sphere (carrying the planet) circulates a larger Aether sphere, centred on the Sun. The centre of the smaller sphere is mounted at the Kepler radius ' R ' from the Sun circulating in the orbit year ' $t = 87.969$ days'. Operational Physics is demonstrated rather than the varying gravitational and mathematical variations needed by the current hypothetical 'Orbit'. The repulsive nature between the two spheres is open to speculation.

Key Words

Kepler's Constant, Aether spheres, Helical orbits

This narrative will begin with some relevant quotes from 'Wicki' to explain the current wishful thinking in 'Standard Physics':-

- a) "...The higher velocity of the Planet when it is near Perihelion is clear from the greater distance it covers in each five day interval..."
- b) "...transits of Mercury across the face of the Sun can only occur when the Planet is crossing the plane of the ecliptic at the time it lies between Earth and Sun ... about every seven years..."

[Writer;- Observation available about five hours every seventh year, Everything else is hypothetical and not compatible with (a) above?]

- c) "...At certain points on Mercury's surface, an observer would be able to see the Sun, rise about half way, then reverse and set before rising again..."
- d) "...approximately four days before Perihelion, Mercury's angular velocity equals it's angular rotational velocity so that the Sun's apparent motion ceases:..." [?]
- e) "...Thus, to a hypothetical observer... the Sun appears to move in a retrograde direction..."
- f) "...most eccentric orbit...: it's eccentricity is 0.21... ranging 46,00,000 (0.306666...Au) – 70,000,000km...(0.4666...Au)"

[writer's note; these physics require gravity which varies by inverse distance squared, requiring a 230% change for Mercury every 44 days]

- g) "... It takes 87.969 Earth days to ... orbit..."
- h) "... two points on Mercury's equator, 180 degrees apart... around Perihelion in alternate Mercury years (author -176 earth days), the Sun passes overhead, reverses,... passing overhead again.. then reverses again, to pass overhead a third time ... sixteen Earth-days for the process..."

[Writer;- For this to occur once per 176 days as viewed from Earth appears highly unlikely? See hypothesis below]

Presented with this data, what conclusions can be derived?

In summary the non-likely shape of Mercury's supposed smooth elliptical orbit which according to current Physics is an egg shape or a diagonal section through a 'Cone'.

SOLUTION MODEL

A brief analogy will be described here to outline the hypothesis which follows:-
A partial model of Mercury's orbit can be constructed from two paper discs

Disc A labelled **R1** is 600mm dia.

Disc B labelled **R2** is 150mm dia. .

Construction – draw a circle at centre of **R1**, say 40m dia. Then the distance from the centre to the circumference in the model becomes Perihelion radius, of 300mm.

Place disc **R2** touching **R1** at a point where the circumference of each circle touch.

Place a small line mark 'say 5mm long.' This is the centre line of Mercury on the circumference **R2**, at the farthest most point from the Sun. This distance is Aphelion, on the model and is 450mm from the Sun.

Mercury's model orbit comprises of two separate circular orbits, which can be derived by slowly rotating **R2** around **R1** while maintaining contact at their circumference's.

When **R2** is on the opposite diameter of **R1** with the Mercury point touching the circumference of **R1**. The 'centre line' Mercury is now at Perihelion - 300mm from the Sun. This can be representative of 180 degrees revolution of **R2** while at the same time travelling around the sun disc, **R1**, by 180 degrees. i.e. both discs rotate 360 degrees in one yearly orbit. One Aphelion and one Perihelion per Mercury year.

In the following hypothesis the 150mm disc (**R2**) rotates every eight (8) days. That is, there are eleven repetitions of Aphelion/ Perihelion in one mercury orbit of 87.969 days.

In the Standard Physics model, based on the Kepler Standard orbit radius is labelled **R3** and is the distance from the Sun to the centre of **R2**, here 375mm. This circle is centred on the Sun and should have been the orbit radius of Mercury, to match the other planets in the Solar System. Instead there is a second Aether sphere labelled **R2** of 0.159Au. dia about which Mercury is actually orbiting. Now Mercury's orbit is defined by two perfect spheres and one perfect circle, with no requirement for variations in orbital speeds or changes in angular momentum. Where **R2** is derived this sphere is counter rotating and it is in some form of charge conflict with sphere **R1**.

BACKGROUND

All planets travel through Space in the trajectory path of a Helix. The orbits become elongated by the Sun's 400+ Km/s speed (Aspden) to 700km/s (T.V. presentation) around the galaxy. Each Planetary Helix is defined by a cylinder, orbiting the Sun at a radius **R**, with a pitch defined the Planet's orbit year, travelling at Sun's speed. The helical combination of these speeds vastly swamps the planet orbital speed to a tiny percentage. Kepler defined the relationship a few hundred years ago ($R^3/t^2 = \text{constant}$), but is not included in current elliptical mathematics. Any diagonal section through the Helix cylinder is an ellipse with a single focal point (The Sun). In comparison to the orbital distances travelled the helical travel is 0.23 Au per day, which for Mercury is about ten times the orbital distance. This paper will refine the above model for a the more realistic Physical operation to describe Mercury's travel, in lieu of the Standard Model Physics concept.

- A) The inferred radial difference between Aphelion and Perihelion requires the Sun's gravity to provide an oscillating force change between these limits every forty four (44) days. It should be noted that this hypothetical gravity change [230%] does not affect the other Solar System Planets, therefore must not exist. Mercury's orbit can only be controlled by observed constant forces. By existing definition, Solar orbits and the Sun exist in the X – Y plane, which orbit cannot exist in practice, due to the Solar System travelling through Space at greater than 400km/s in the 'Z' direction. Resulting in all planets travelling in a three dimensional Helical motion. This speed totally swamps any orbital speed effects, which for Mercury, as published in literature, is defined as 48km/s relative to the Sun. The above model concept is illustrates as a two dimensional view, to assist those who find that three dimensional visions cause some difficulty.
- B) As an **elliptical** (X – Y) orbit motion is impossible, then so is the methodology for "Mercury Perihelion Advance" and the falsification of surrounding maths. Also there is no published methodology currently available to show how an angular difference of less than seven (7) seconds of arc could be measured over a seven year difference in sightings while subject to

massive planetary oscillations (h) above. Either by superb optical or superb chronometer differences to justify any reason for an elliptical (or egg shaped orbit) mathematical hypothesis being required.

- C) As quoted above from 'Wicki.' that at the position of inferred Perihelion, Mercury undergoes radical changes in orbital speed. Such speed changes are now observed as oscillations which fail to support a smooth elliptical motion or to justify corresponding theoretical changes in orbital speed in the X-Y plane. The oscillations in Mercury's orbit require a sixteen day period, including the reversals. This data points to the misguided assumptions from an Earth viewed Perihelion. These oscillations, show it would be impossible to measure a tiny (less than seven arc-seconds) separated by a seven year interval, even if the technology existed over a century ago. A measurement further compromised by a substantial Sun oscillation (of about three Sun diameters – Alkinis E. / 2012) resulting in a moving background. It may not have been known that these observation are could be corrupted by the SUN wobbling in the background.

HYPOTHESIS - AN UPDATE

Relying instead on proven data from Tycho Brahe and Kepler's published data an alternative scenario can be derived which does not require the use of "The Standard Model's" variable mathematics. In the case of Mercury, as partly illustrated by the paper model, the orbit is the result of a double helical path with an outer helix **R2** wrapped around the cylinder of the internal helix **R1**. Neither exist in the 'Standard Model' but combine to replace the Standard Model **R3** and **t3** (as defined).

An oft used quote attributed to Newton is paraphrased in support of an Aether
"...any sort of intelligence requires a Space Substance Medium, for the transport of a gravitational attraction..."

Later the terminology 'Aether' was renamed 'Space Time' and later again 'Dark Matter, Vacuum Energy, Dark Energy, Space fabric etc. Ho-Hum?'. Even the "Standard Model" is in need for some form of Space matter substance?

Kepler's R^3/t^2 is a recognised standard in defining the relationship between a planet's orbit radius and it's orbit travel time. In this paper it will be here defined as a sphere of Aether mass of radius **R**, in defiance of the Standard Model status. As a side issue, with reference to 'Relativity', there are numerous detailed studies which claim to show the associated maths are faulty and the Physics suspect. As these studies have not attracted any rebuttals, in this writers opinion these critiques on the failure of Relativity must stand, although it is not directly a factor in this paper. Also the study of Physics is supposedly the study of real behaviour of real matter particles, which dispenses with anomalies or paradoxies.

MERCURY DATA – Re-interpreted

Kepler's data now is defined as an Aether sphere of radius **R**, with each Solar System Planet mounted on a spherical surface. This sphere is revolving at a orbit year of time '**t**' while travelling trough SPACE spiralling in a helical pattern, such that $\rightarrow (\text{Rotating Volume} \times 1/t^2)$ is a constant.

In engineering terms :- Spinning Volume x Ω^2 , represents kinetic energy.

A Kepler derivation will now be used to illustrate an explanation of the observed oscillating anomalies, cancelling the idea of a smooth elliptical orbit for Mercury:-

HYPOTHETICAL SOLUTION

- A) Orbit time **t** = 87.969 earth days \rightarrow **t3** = 0.240 852 59 yrs

From Kepler the theoretical associated radius **R3** = 0.387 109 842Au. (As a perfect circle)

R3 should have been the location of planet Mercury, except that it was already mounted on an Aether sphere radius **R2**, so the whole sphere was captured to orbit at the Kepler radius.

B) Published data and with reference to above paper model

Perihelion = 46 001 200km = 0.307 498 989 Au. (now defined as **R1**)

Aphelion = 69 816 900km = 0.466 697 09 Au. (now defined as **R1**+dia. **R2**)

Hypothesis Definition:- Aphelion value – Perihelion value = difference as a new sphere of Dia. (**R2**) = 0.159 198 101 Au. and a circumference of nearly 0.500... Au.

(→ and radius of this **R2** sphere = 0.079 599 905Au.) – (measurement No1)

These numbers are published by “Wicki” from data which can be refined to show a Physics solution. What is claimed from the above numbers is that the Aphelion-Perihelion difference is the diameter of a new secondary Aether orbit sphere labelled **R2**.

From Kepler it can be derived that orbit time ‘**t3**’ of 87.969 days derives a radius

R3 = 0.387 109 842Au derived from ‘**t3**’ = 0.240 852 59yrs

C) Hypothesis - Alternative Derivation of **R2**

From “Wicki” there is an oscillation over two four day periods, (by this hypothesis an eight day orbit) → 8 days = 0.021 903 405yrs (a Kepler **R2** “yearly orbit”)

And it’s associated derived sphere radius **R2** = 0.078 265 871Au. (Measurement No2)

Compare this derivation with the same derivation from the published Data

(measurement No1)=[0.079 599 905 Au] a difference of 0.001 334 Au or 1.67%.

For Mercury this Secondary sphere **R2** is the equivalent the Kepler Solar orbit ‘sphere’ as matching other planet members of the Solar System. The centre of the secondary Aether sphere **R2** is mounted on the centre line of the imaginary sphere **R3**. It may be speculated that Mercury was travelling on this sphere when captured?? by the Sun.

The **Real** spheres **R1** and **R2** touch on their circumferences as per the paper model above

D)

Aphelion = (imaginary **R3**) 0.387109 842Au + radius **R2** of 0.078 265 871Au
= 0.465 375 571Au [‘Wicki’ gives Aphelion 0.466 67Au]

By this hypothesis Aphelion :-

R1 + 2 x **R2** = 0.307 498 989 Au + 2 x 0.078 265 871Au = 0.464 030 73Au A difference of 0.00264 Au or 0.00566%

E) Now with Mercury’s orbit defined as a combination of two Aether spheres in the X – Y plane and if possible to see, would be two circles, but in practice are two spheres spiralling along a helical path in the ‘Z’ direction at greater than 400Km/s and therefore if successive “photographed” observations were possible would show sphere **R2 images behind each other for successive Aphelion -- Perihelion positions.(or 0.92 Au)**

From Kepler **R2** → orbit of **8.0**days, now re-defined as 0.021 903 408yrs as confirmed by Wicki. which reports **4.0** days forward and **4.0** days in reverse

‘Wicki’ says the perihelion oscillation occupies sixteen days as Mercury backtracks for half an **R2** orbit in reverse of **R1** and then accelerates during the next half **R2** orbit in phase with **R1**.

There are now eleven, eight day rotations along the helical path for each complete yearly Orbit, for a total of 88days per orbit. This is 5.5 rotations and 5.5 repetitions of Perihelion and Aphelion, per 44 days for the location of mercury on the **R2** sphere. By observation only 87.969 days and therefore 43.9845 days between these 5.5 orbits by **R2** of Aphelion – Perihelion repetitions.

It is further hypothesised that this secondary **R2** orbit, on which Mercury is mounted, is responsible for observed reversal of Mercury’s travel as each **R2** rotation has half orbits in

conflict with **R1**, leading to a reverse oscillation with **R1** along the primary orbit travel **R3** giving an apparent near static Mercury location as stated by 'Wicki' and defines the zig/zag motion reported.

F) SOME ARITHMETIC

Speed for **R3** primary orbit is defined as 48km/s which is the speed of the centre of **R2** sphere. In four days there is the following movements

Radius **R2** = 0.078 265 871Au or 0.156 568 5 Au Dia.

Or **R2** dia = 23. 485 275 x 10⁶ kms and Circumference = 0.491 874 445 Au.

Therefore during eight days has and a secondary orbit speed around

R2 of 106.7 km/s)

R2 rotates a reverse diameter of 0.156 568 5Au = 23,485,275km in four days

Mercury's has one diameter travel reversal of 23, 485 275km in 4 days

While it's centre line **R2** sphere at the same time moves forward a distance of

48km/s x 4 x 24 x 3600 = 16, 588 800 km a nett reversal of 6,896 475 km

In the second half orbit the forward distance is 23,485 275 + 16, 588 800 = 40, 074 075km

- G) Earth observes one perihelion every seven years or of some location in every 319.6976 **R2** orbits which can be either in phase travel or opposite/retro phase travel with the **R1**.

'Wicki' says this happens only once per 88day orbit but on opposite sides of mercury's equator due to the three spins per two orbits.

In this hypothesis Aphelion and Perihelion occurs every 8.0 days but can only be seen from

Earth every seven years which is 29.0634 **R1** orbits → 319.6976 **R2** orbits. If Mercury's transit is moving rapidly across the Sun, then an Aphelion is being observed. If Mercury appears stationery or moving in reverse then a perihelion is being observed.

Every seven years Mercury appears to have completed an excess of 0.0634 of an **R1** orbit, or a precession of 0.00218 of an **R1** orbit per orbit → an angle of 2,825 arc-secs./orbit.

'Wicki' reports 3 Spins per 2 orbits of **R3** but further clarifies this as one spin per two orbits, such that one Mercury day is 176 Earth days. most confusing!

RELATIVE SPEEDS

'Wicki' quotes the existing status orbit as 48km/s relative to the Sun. To this the real numbers must be added to account for the Helical paths travelling with the Sun at a speed said to be in excess of 400km/s.

Therefore **R2** spheres in four days, or half an orbit, travel more than 0.92 Au along the Sun centred helix centre line and a much greater distance around the combined helical circumferences.

While the corresponding half **R2** orbit (or Mercury orbit travel) rotates 0.23Au which is the distance between successive Perihelion and Aphelion orbit locations.

SUMMARY

Mercury's orbit consists of eleven spherical circumference orbits of an Aether sphere labelled **R2** which has a rolling contact to the surface to of an Aether sphere of radius **R1**.

R1 being radius equal to Perihelion distance from the Sun.

There are eleven Perihelion – Aphelion locations in 87.969 days of Sun Orbit.

The Kepler radius being derived from an eight day orbit and applied to the separate Aether sphere **R2**.

R2 being the Aether sphere containing the orbit of Mercury.

J.E. MILLER (16 APRIL 2014)