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The 350-Year Error in Solving the Newton - Kepler Equations

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Abstract: Real time Physics solution of Newton's - Kepler's equations proves with unprecedented accuracy that not only relativity theory is wrong but all of physics is wrong for past 400 years including 109 years of Nobel Prize winner physics and physicists and 400 years of astronomy. The proof is attached and I dare all to prove it wrong. The elimination of make-believe relativity theory and make-believe quantum description of matter is a matter of time and not a matter of science and the time is now!

The proof: We measure The Gravitational force in the Lab and we get in polar coordinates:

One: $d^2 (m\,r)/dt^2 - (m\,r)\,\theta'^2 = -GmM/r^2$ Newton's Gravitational Equation (1)
Two: $d\,(m^2r^2\theta')/d\,t = 0$ Central force law or Kepler's law (2)
Where m = mass of primary object; M = mass of secondary object
G = Gravitational constant and r = primary-secondary distance

We solve these two equations in polar coordinates and we get Newton's - Kepler's two body systems solution as follows applied to planetary systems around the Sun. Planets relative motion around their moving mother sun is an ellipse given by an ellipse equation known as Newton's equation with Sun-Planet distance r and Sun is at the focus of the ellipse and θ is the angle of rotation. An ellipse equation is written as:

1 - Newton's Equation: $r(\theta) = a(1-\varepsilon^2)/(1 + \varepsilon \text{ cosine } \theta)$

We direct our telescopes to the skies and we see something different:
The Telescopes show that these ellipses are rotating their axes:
Newton Changed Kepler's law to explain the axial rotation rate and got
Axial rotation rate $W = \pi\,(m/M)$ radians per Orbital Period
Or **$W = \pi\,(m/M)\,[180/\pi]\,[36526/T]\,[3600]$**

When applied on planet **Mercury advance of Perihelion** it worked very well.
When applied on other planets and binary stars it failed very badly.

Einstein said if you add another force (k/r^4) and time travel then you can get this equation:

One: $d^2 (mr)/dt^2 - (mr)\theta'^2 = -GmM/r^2 + (k/r^4)$ Einstein's Gravitational Equation (1)

Two: $d(m^2r^2\theta')/dt = 0$ Central force law or Kepler's law (2)

2 - Einstein got $\mathbf{r = (\theta, v) = [a (1-\varepsilon^2)/ \{1 + \varepsilon \text{ cosine } [\theta - w]\}}$
For planetary motion describing an ellipse with rotating axes with rotation rate W:
With $W = [6\pi/ (1 - \varepsilon^2)] (v/c)^2$ in radian per orbital period; $v^2 = GM/a$

Or $\mathbf{W = [6\pi/ (1 - \varepsilon^2)] (v/c)^2 [180/\pi] [36526/T] [3600]}$ in arc second per century

When this formula was applied to planet Mercury Advance of perihelion it gave good results. When it was applied to Venus it proved wrong and physicists blamed the problem of the non agreements of Venus relativity theory predicted advance of perihelion on experimental measurements data and claimed that the advance of perihelion of Venus is so small that the data scientific errors are at least 50 %. When it was applied to other two body systems measured data like binary stars it failed badly and Astronomers and physicists added tidal and rotational distortions terms to make general relativity theory work without much success hitting once and missing few dozen times for every time it hits .

3 - In fall of 1977 at age 19 a physics major freshman named Joe Nahhas tested projected light aberrations visual effects of orbit and spin deflection rates and found that their value is exactly the axial rotations rates measured by astronomers of both planets and stars and concluded that these rotational rates used as confirmation of relativity theory and called Time travel are "apparent" rotations and has no existence and a measurement errors and it confirms one thing that relativity theory can be deleted without loss of subject
Why apparent rotations? Because Newton's -Kepler's equation solved wrong for 350 years. How did that happen?

What we see is not what happened. We can see something that had not happened. We can only something that had happened. We can only see something in present time that happened in past time. In other words we can only see something in real time that happened in event time and the difference between what we see and what happened amounts to measurements visual effects confused for reality physics and given two names relativity theory and quantum mechanics. Distance measurement using signals introduces time delays. Meaning that Newton's -Kepler's equations are solved in event time and they need be solved in real time

Present time = present time
Present time = past time + [present time - past time]
Present time = past time + time delays
Real time = event time + time delays

What we measure = what happened + what changed till things are measured.
Real time solution = Newton's classical event time solution + time delays
What we see or measure is relativistic = Absolute event + relativistic time delays
What happened is absolute = real time relativistic event - real time relativistic effects

Definitions:

A - **Real time location**

An object at of absolute location **r** when measured in real time a decay factor of $e^{[\lambda (r)] t}$ and a motion factor of $e^{[i \omega (r)] t}$ is introduced to a total factor of $e^{[\lambda (r) + i \omega (r)] t}$ and the location of an object measured in real time is $\mathbf{S} = \mathbf{r}\, e^{[\lambda (r) + i \omega (r)] t}$

B - **Real time Velocity**

Let $\mathbf{S} = \mathbf{r}\, e^{[\lambda (r) + i \omega (r)] t}$

Then Velocity = $\mathbf{P} = d\mathbf{S}/d\mathbf{t} = \{[(d\mathbf{r}/dt) + \mathbf{r}\, [\lambda (r) + i \omega (r)]\}\, e^{[\lambda (r) + i \omega (r)] t}$

$\mathbf{P} = \{[\mathbf{v} + \mathbf{r}\, [\lambda (r) + i \omega (r)]\}\, e^{[\lambda (r) + i \omega (r)] t}$

C - **Real time Areal velocity**

$A = |\mathbf{r} \times d\,\mathbf{r/2}|$

Areal velocity: $dA/dt = |\mathbf{r} \times (d\,\mathbf{r/2}dt)| = |\mathbf{r} \times \mathbf{v}/2|$

And $|\mathbf{S} \times (d\,\mathbf{S/2}dt)| = |\mathbf{S} \times \mathbf{P/2}|$

$= |\mathbf{r}\, e^{[\lambda (r) + i \omega (r)] t} \times \{[\mathbf{v} + \mathbf{r}\, [\lambda (r) + i \omega (r)]\}\, e^{[\lambda (r) + i \omega (r)] t}\}/2|$

$= |\mathbf{r} \times \mathbf{v}/2|\, e^{2[\lambda (r) + i \omega (r)] t}$

$|\mathbf{S} \times \mathbf{P}/2| = |\mathbf{r} \times \mathbf{v}/2|\, e^{2[\lambda (r) + i \omega (r)] t}$

D - **Real time Areal velocity in polar coordinates**

$|\mathbf{S} \times \mathbf{P}/2| = |\mathbf{r} \times \mathbf{v}/2|\, e^{2[\lambda (r) + i \omega (r)] t}$

$= |[r\,\mathbf{r}_{(1)}] \times [r'\,\mathbf{r}_{(1)} + r\,\theta'\,\boldsymbol{\theta}_{(1)}]/2|$

$= (r^2\,\theta'/2)\, [e^{2[\lambda (r) + i \omega (r)] t}]$

E - **Real time motion Areal velocity visual effects in polar coordinates**

$|\mathbf{S} \times \mathbf{P}/2| = |\mathbf{r} \times \mathbf{v}/2|\, e^{2[\lambda (r) + i \omega (r)] t}$

$= |[r\,\mathbf{r}_{(1)}] \times [r'\,\mathbf{r}_{(1)} + r\,\theta'\,\boldsymbol{\theta}_{(1)}]/2|$

$= (r^2\,\theta'/2)\, [e^{2[\lambda (r) + i \omega (r)] t}]$

With $\lambda (r) = 0$

$|\mathbf{S} \times \mathbf{P}/2| = (r^2\,\theta'/2)\, [e^{2 i \omega (r) t}]$

F - **Real time motion Areal velocity in polar coordinates along the line of measurement**

$|\mathbf{S} \times \mathbf{P}/2| = |\mathbf{r} \times \mathbf{v}/2|\, e^{2[\lambda (r) + i \omega (r)] t}$

$= |[r\,\mathbf{r}_{(1)}] \times [r'\,\mathbf{r}_{(1)} + r\,\theta'\,\boldsymbol{\theta}_{(1)}]/2|$

$= (r^2\,\theta'/2)\, [e^{2[\lambda (r) + i \omega (r)] t}]$

With $\lambda (r) = 0$

$|\mathbf{S} \times \mathbf{P}/2| = (r^2\,\theta'/2)\, [e^{2 i \omega (r) t}]$

$= (r^2\,\theta'/2)\, [\text{cosine } 2 \omega t + i \text{ sine } 2 \omega t]$

$|\mathbf{S} \times \mathbf{P}/2|\,(x) = (r^2\,\theta'/2) \text{ cosine } 2 \omega t$

$= (r^2 \theta'/2) [1 - \text{sine}^2 \omega t]$

$|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2) = - r^2 \theta' \text{sine}^2 \omega t$

7 - **400 years of wrong Astronomy of real time Areal velocity visual effects**

$|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2) = - r^2 \theta' \text{sine}^2 \omega t$

With $\omega T = \text{arc tan} (v/c)$

$|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2) = - r^2 \theta' \text{sine}^2 \text{arc tan} (v/c)$

With $(v/c) << 1$

Then $|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2) = - r^2 \theta' (v/c)^2$

G- **Real time Areal velocity visual effects for an ellipse**

Then $|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2) = - r^2 \theta' (v/c)^2$

With $r^2 \theta' = 2 \pi a b$

Then $|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2) = [- 2 \pi a b/T] (v/c)^2$

H - **Advance of Perihelion visual effects**

$\{|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2)\} 2/a^2 (1 - \varepsilon)^2 = [- 2 \pi a b/T] (v/c)^2 [2/ a^2 (1 - \varepsilon)^2]$

$= - 4 \pi (b/a) (v/c)^2/ T (1 - \varepsilon)^2$

$= - 4 \pi \{[\sqrt{(1 - \varepsilon^2)}]/ T (1 - \varepsilon)^2\} (v/c)^2$

I - The **Advance of Perihelion of planets visual effects in arc sec/ century.**

$\{|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2)\} 2/a^2 (1 - \varepsilon)^2 = - 4 \pi \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

$\{(180/\pi) (36526) (3600)\} = [-720x36526x3600/T] \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

J - **Advance of Perihelion visual effects of Planet mercury in arc sec/ century.**

$\{|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2)\} 2/a^2 (1 - \varepsilon)^2 = - 4 \pi \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

$\{(180/\pi) (36526) (3600)\} = [-720x36526x3600/T] \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

With $\varepsilon = .206$, $T = 88$; $v = v^* + v^\circ$; v^* = orbital velocity = 47.9 km/sec v° = spin speed of observer on earth = 0.3km/sec Europe. $v = v^* + v^\circ = 48.2$ km/sec; v° (mercury) = 3 m/s

And W" (calculated) = $[-720x36526x3600/T] \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

$= [-720x36526x3600/88] (1.552) (48.2/300,000)^2$

$= 43.10$ Arc sec /century

K - **Advance of Perihelion visual effects of Planet Venus in arc sec/ century.**

$\{|\mathbf{S} \times \mathbf{P}/2|(x) - (r^2 \theta'/2)\} 2/a^2 (1 - \varepsilon)^2 = - 4 \pi \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

$\{(180/\pi) (36526) (3600)\} = [-720x36526x3600/T] \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

With $\varepsilon = .206$, $T = 244.7$; $v = v^* + v^\circ$; v^* = orbital velocity = 35.12 km/sec v° = spin speed of observer on earth = 0.3km/sec Europe. And v° (Mercury) = 6.52km/sec

$v = v^* + v^\circ = 41.94$ km/sec

And W" (calculated) = $[-720x36526x3600/T] \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$

$= [-720x36526x3600/224.7] (1.00761) (41.94/300,000)^2$

= 8.2" Arc sec /century

L - **Binary stars apsidal motion in arc sec**

W" (calculated) = $[-720x36526x3600/T] \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\} (v/c)^2$ arc sec/ century

This formula
W" (calculated) = $[-720x36526x3600/T]\ \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\}\ (v/c)^2$ arc sec/ century
Worked on any two body problem

What this formula said was that the Advance of perihelion of planets is a visual effect

Meaning that Einstein's relativity is all wrong and Newton's equations were solved wrong for the past 350 years.

The challenge was, can we find this formula?

W" (calculated) = $[-720x36526x3600/T]\ \{[\sqrt{(1 - \varepsilon^2)}]/ (1 - \varepsilon)^2\}\ (v/c)^2$ arc sec/ century
Form Newton's - Kepler's equations?

Meaning there is a new solution for Newton's - Kepler's equations

One: $d^2 (mr)/dt^2 - (mr)\theta'^2 = -GmM/r^2$ Newton's Gravitational Equation (1)
Two: $d (m^2r^2\theta')/d\,t = 0$ Central force law or Kepler's law (2)

Meaning that the solution, $r = (\theta, t) = [a (1-\varepsilon^2)/ (1 +\varepsilon \text{ cosine } \theta)]$
is not the correct solution but it is the event solution and what is missing is:
Real time solution of Newton's - Kepler's equations and this solution is:

Nahhas' Solution is: $r = (\theta, t) = [a (1-\varepsilon^2)/ (1 +\varepsilon \text{ cosine } \theta)]\ e^{[\lambda(r) + i\,\omega(r)]\,t}$

And "apparent" axial rotation rate known as the Advance of the Perihelion is:

W" = $(-720x36526x3600/T)\{[\sqrt{(1-\varepsilon^2}]/ (1-\varepsilon)^2\}\ (v^* + v^\circ/c)^2$ seconds of arc per century

And v^* is orbital velocity, v° = spin velocity
T = period of orbit (days) t; ε = eccentricity

Using Newton's Gravitational/Central forces law these two equations give experiment to theory results better than any said or published physics for the past 400 years. Furthermore, the new real time physics proved that relativity theory experimental verifications is an error and error only; a case of 109 years of Nobel Prize winner physics and physicists that can not read a telescope.

Introduction: For 350 years Physicists Astrophysicists and Mathematicians missed Kepler's time dependent equation that produced a time dependent Newton's solution and together these two equations combined classical and quantum mechanics into one Universal Mechanics that explain relativistic effects as the difference between time dependent measurements and time independent measurements of moving objects. In practice relativistic amounts to visual effects of projected light aberrations along the line of sight of moving objects meaning that all laws of relativity theory can be explained as visual effects or "apparent" motion and laws of Newton's laws of motion with no physical Existence. Furthermore, this New Newtonian time dependent equation solution solved all motion puzzles of past 350 years including those puzzles that can not be solved by relativistic mechanics or any said or published mechanics with precisions to make Einstein's space-time confusions of mechanics deleted without loss of subject, and the re-writing of Newton's Mechanics and Kepler's quantum mechanics as part of new time dependent Universal Mechanics or Real time Universal Mechanics. Furthermore; it will be shown that not only all motion puzzles in modern mechanics and astronomy are solved by Universal Mechanics but that relativity theory amount to a waste as taught in classrooms.

Universal Mechanics

All there is in the Universe is objects of mass m moving in space (x, y, z) at a location $\mathbf{r} = \mathbf{r}$ (x, y, z). The state of any object in the Universe can be expressed as the product

$\mathbf{S} = m\,\mathbf{r}$; State = mass x location:

$\mathbf{P} = d\,\mathbf{S}/d\,t = m\,(d\,\mathbf{r}/d\,t) + (dm/d\,t)\,\mathbf{r}$ = Total moment
= change of location + change of mass
$= m\,v + m'\,r$; v = speed = d r/d t; m' = mass change rate

$\mathbf{F} = d\,\mathbf{P}/d\,t = d^2\mathbf{S}/dt^2$ = Total force
$= m\,(d^2\mathbf{r}/d\,t^2) + 2(dm/d\,t)\,(d\,\mathbf{r}/d\,t) + (d^2m/d\,t^2)\mathbf{r}$
$= m\,\boldsymbol{\gamma} + 2m'\mathbf{v} + m''\mathbf{r}$; γ = acceleration; m'' = mass acceleration rate

In polar coordinates system

We have $\mathbf{r} = r\,\mathbf{r}_{(1)}$ Where $\mathbf{r}$ = location and $\mathbf{r}_{(1)}$ unit vector in $\mathbf{r}$ direction
And $\mathbf{v} = r'\,\mathbf{r}_{(1)} + r\,\theta'\,\boldsymbol{\theta}_{(1)}$ Where $\mathbf{v}$ = velocity vector and $\boldsymbol{\theta}_{(1)}$ **is** unit tangent
And $\boldsymbol{\gamma} = (r'' - r\theta'^2)\,\mathbf{r}_{(1)} + (2r'\theta' + r\,\theta'')\,\boldsymbol{\theta}_{(1)}$ where $\boldsymbol{\gamma}$ = acceleration vector
Then
$\mathbf{F} = m\,[(r''-r\theta'^2)\,\mathbf{r}_{(1)} + (2r'\theta' + r\,\theta'')\,\boldsymbol{\theta}_{(1)}] + 2m'[r'\,\mathbf{r}_{(1)} + r\,\theta'\,\boldsymbol{\theta}_{(1)}] + (m''\,r)\,\mathbf{r}_{(1)}$

$= [d^2(m\,r)/dt^2 - (m\,r)\theta'^2]\mathbf{r}_{(1)} + (1/mr)[d(m^2r^2\theta')/d\,t]\boldsymbol{\theta}_{(1)} = [-GmM/r^2]\mathbf{r}_{(1)}$

Proof:

With $\mathbf{r} = r\,[\text{cosine}\,\theta\,\hat{\mathbf{i}} + \text{sine}\,\theta\,\hat{\mathbf{J}}] = r\,\mathbf{r}_{(1)}$
And $\mathbf{r}_{(1)} = \text{cosine}\,\theta\,\hat{\mathbf{i}} + \text{sine}\,\theta\,\hat{\mathbf{J}}$

Then $\mathbf{v} = d\,\mathbf{r}/d\,t = r'\,\mathbf{r}_{(1)} + r\,d[\mathbf{r}_{(1)}]/d\,t = r'\,\mathbf{r}_{(1)} + r\,\theta'[-\,\text{sine}\,\theta\,\hat{\mathbf{i}} + \text{cosine}\,\theta\,\hat{J}]$
$= r'\,\mathbf{r}_{(1)} + r\,\theta'\,\boldsymbol{\theta}_{(1)}$

And $\boldsymbol{\theta}_{(1)} = -\text{sine}\,\theta\,\hat{i} + \text{cosine}\,\theta\,\hat{J}$; $\mathbf{r}_{(1)} = \text{cosine}\,\theta\,\hat{i} + \text{sine}\,\theta\,\hat{J}$

And d [**θ** (1)]/d t = θ' [- cosine θ î - sine θ Ĵ= - θ' **r** (1)
And d [**r** (1)]/d t = θ' [-sine θ î + cosine θ Ĵ] = θ' **θ**(1)

γ = d [r' **r** (1) + r θ' **θ** (1)] /d t = r" r (1) + r' d [**r** (1)]/d t + r' θ' **r**(1) + r θ" **r**(1) +r θ' d[θ(1)]/d t
γ = (r" - rθ'²) **r** (1) **+** (2r'θ' + r θ") **θ** (1)

With $d^2 (m\ r)/dt^2 - (m\ r)\ \theta'^2 = -GmM/r^2$ Newton's Gravitational Equation (1)
And $d (m^2r^2\theta')/d t = 0$ Central force law (2)

(2): $d (m^2r^2\theta')/d t = 0 \Leftrightarrow m^2r^2\theta' = H (0, 0)$ = constant
$= m^2 (0, 0)\ h (0, 0)$
$= m^2 (0, 0)\ r^2 (0, 0)\ \theta'(0, 0); h (0, 0) = [r^2 (\theta, 0)] [\theta'(\theta, 0)]$
$= [m^2 (\theta, 0)] [r^2 (\theta, 0)] [\theta'(\theta, 0)]$
$= [m^2 (\theta, 0)]\ h (\theta, 0); h (\theta, 0) = [r^2 (\theta, 0)] [\theta'(\theta, 0)]$
$= [m^2 (\theta, t)] [r^2 (\theta, t)] [\theta'(\theta, t)]$
$= [m^2 (\theta, 0)\ m^2 (0, t)] [r^2 (\theta, 0)\ r^2 (0, t)] [\theta'(\theta, t)]$
Now $d (m^2r^2\theta')/d t = 0$
Or $2mm'r^2\theta' + 2m^2rr'\theta' + m^2r^2\theta'' = 0$
Dividing by $m^2r^2\theta'$ to get $2(m'/m) + 2(r'/r) + (\theta''/\theta') = 0$
This differential equation has a solution:

A- 2(m'/m) = 2[λ (m) + ì ω (m)]; λ (m) + ì ω (m) = constant complex number; λ (m) and ω (m) are real numbers; then (m'/m) = λ (m) + ì ω (m)
And dm/m = [λ (m) + ì ω (m)] d t
Integrating both sides
Then $m = m [\theta (t = 0), 0)\ m (0, t) = m (\theta, 0)\ e^{[\lambda(m) + i\ \omega(m)] t}$
And $m (0, t) = e^{[\lambda(m) + i\ \omega(m)] t}$ ------------------------------------ (3)
This Equation (3) is **Kepler's time dependent mass equation**

B- 2(r'/r) = 2[λ (r) + ì ω (r)]; λ (r) + ì ω (r) = constant complex number; λ (r) and ω (r) Are real numbers
Now $r (\theta, t) = r (\theta, 0)\ r (0, t) = r (\theta, 0)\ e^{[\lambda(r) + i\ \omega(r)] t}$
And $r (0, t) = e^{[\lambda(r) + i\ \omega(r)] t}$ --- (4)
And this Equation (4) is Kepler's time dependent location equation

C- Then $\theta'(\theta, t) = \{H(0, 0)/[m^2(\theta,0)\ r(\theta,0)]\}\ e^{- 2\{[\lambda(m) + i\ \omega(m)] t + [\lambda(r) + i\ \omega(r)] t\}}$
And $\theta'(\theta, t) = \theta' (\theta, 0)\ e^{- 2\{[\lambda(m) + i\ \omega(m)] t + [\lambda(r) + i\ \omega(r)] t\}}$ ----- I
This is the angular velocity time dependent equation

And $\theta'(\theta, t) = \theta' (\theta, 0)\ \theta' (0, t)$

Then $\theta'(0, t) = \theta'(0, 0)\ e^{- 2\{[\lambda(m) + i\ \omega(m)] t + [\lambda(r) + i\ \omega(r)] t\}}$ --------II
This is the **Angular velocity time dependent equation**

(1): $d^2 (m\, r)/dt^2 - (m\, r)\, \theta'^2 = -GmM/r^2 = -Gm^3M/m^2r^2$

$d^2 (m\, r)/dt^2 - (m\, r)\, \theta'^2 = -Gm^3 (\theta, 0)\, m^3 (0, t)\, M/ (m^2r^2)$

Let $m\, r = 1/u$

$d (m\, r)/d\, t = -u'/u^2 = -(1/u^2)(\theta')d\, u/d\, \theta = (- \theta'/u^2)d\, u/d\, \theta = -H\, d\, u/d\, \theta$
$d^2(m\, r)/dt^2 = -H\theta'd^2u/d\theta^2 = - Hu^2[d^2u/d\theta^2]$

$-Hu^2 [d^2u/d\theta^2] - (1/u) (Hu^2)^2 = -Gm^3 (\theta, 0)\, m^3 (0, t)\, M\, u^2$
$[d^2u/ d\theta^2] + u = Gm^3 (\theta, 0)\, m^3 (0, t)\, M/H^2$

At $t = 0$; $m^3 (0, 0) = 1$
$[d^2u/ d\theta^2] + u = Gm^3 (\theta, 0)\, M/H^2$
$[d^2u/ d\theta^2] + u = Gm (\theta, 0)\, M/h^2 (\theta, 0)$

The solution $u = Gm (\theta, 0)\, M/h^2 (\theta, 0) + A \text{ cosine } \theta$

Then $m (\theta, 0)\, r (\theta, 0) = 1/u = 1/ [Gm (\theta, 0)\, M (\theta, 0)/h^2 (\theta, 0) + A \text{ cosine } \theta]$
$= [h^2/Gm (\theta, 0)\, M (\theta, 0)]/ \{1 + [Ah^2/ Gm (\theta, 0)\, M (\theta, 0)]\, [\text{cosine } \theta]\}$

$= [h^2 (\theta, 0)/Gm (\theta, 0)\, M (\theta, 0)]/ (1 + \varepsilon \text{ cosine } \theta)$
And $m (\theta, 0)\, r (\theta, 0) = [a (1-\varepsilon^2)/ (1+\varepsilon \text{ cosine } \theta)]\, m (\theta, 0)$

Gives $r (\theta, 0) = [a (1-\varepsilon^2)/ (1+\varepsilon \text{ cosine } \theta)]$_ this is the classical **Newton's equation** (5)
And it is the equation of an ellipse $\{a, b = \sqrt{[1 - a^2]}, c = \varepsilon a\}$

We Have $m\, r = m (\theta, t)\, r (\theta, t)$
$= m (\theta, 0)\, m (0, t)\, r (\theta, 0)\, r (0, t)$

And $r (\theta, t) = r (\theta, 0)\, r (0, t)$
With $r (0, t) = \text{Exp } [\lambda(r) + i\, \omega (r)]\, t$ (4)
And $r (\theta, 0) = [a (1-\varepsilon^2)/ (1+\varepsilon \text{ cosine } \theta)]$ (5)

Then $r = (\theta, t) = [a (1-\varepsilon^2)/ (1+\varepsilon\cos\theta)]\, e^{[\lambda(r) + i\, \omega(r)]\, t}$ (6)

This is the new solution Newton's time dependent solution

Classical Newton's Equation is: $r = r (\theta) = r (\theta, 0) = a (1-\varepsilon^2)/ (1+\varepsilon\cos\theta)$ (7)

This is the equation space-time physicists mock and then they introduce the make-believe space- to imaginary time -back to space confusion of physics

Discussion of Equations (3), (6) and (7)

Equation (3) is a time dependent wave equation and equation (7) is the classical relative standing orbital equation that describes the elliptical motion. Equation (6) gives a complete solution of the two body problems, which is a time dependent rotating elliptical motion. It is a particle in a relative elliptical orbit and the orbit is rotating like a wave. This equation combines quantum mechanics and classical mechanics and solves the wave particle duality as follows.

In general $r = (\theta, t) = [a (1-\varepsilon^2)/ (1+\varepsilon\cos\theta)]\, e^{[\lambda(r) + i\, \omega(r)]\, t}$

We have $r (\theta, t) = r (\theta, 0)\, r (0, t)$

With $r (0, t) = \text{Exp}\, [\lambda(r) + i\, \omega (r)]\, t$ (4)

And $r (\theta, 0) = [a (1-\varepsilon^2)/ (1+\varepsilon \text{ cosine } \theta)]$ (5)

If (4) = constant, then,

The total particle aspect shows up because the wave like motion is at a constant value

If (5) = constant, then,

The total wave aspect shows up because the particle like orbit is at a constant value

Now let us find the rate of advance of perihelion/apsidal motion

If $\lambda (m) \approx 0$ fixed mass and $\lambda(r) \approx 0$ fixed orbit

By fixed mass we mean no matter (constant mass) added or subtracted

By fixed or bit we mean that these quantities are constant $\{a, b = \sqrt{[1 - a^2]}, c = \varepsilon a\}$

Then $r (\theta, t) = r (\theta, 0)\, r (0, t) = [a (1-\varepsilon^2)/ (1+\varepsilon \text{ cosine } \theta)]\, e^{i\, \omega(r)\, t}$

And $m = m (\theta, 0)\, \text{Exp}\, [i\, \omega (m)\, t] = m (\theta, 0)\, e^{i\, \omega(m)\, t}$

We Have $\theta'(0, 0) = h (0, 0)/r^2 (0, 0) = 2\pi ab/ Ta^2 (1-\varepsilon)^2$

$= 2\pi a^2 [\sqrt{(1-\varepsilon^2)}]/T\, a^2 (1-\varepsilon)^2$

$= 2\pi [\sqrt{(1-\varepsilon^2)}]/T (1-\varepsilon)^2$

We get $\theta'(0, 0) = 2\pi [\sqrt{(1-\varepsilon^2)}]/T (1-\varepsilon)^2$

Then $\theta'(0, t) = \{2\pi [\sqrt{(1-\varepsilon^2)}]/ T (1-\varepsilon)^2\}\, e^{- 2i [\omega(m) + \omega(r)]\, t}$

$= \{2\pi [\sqrt{(1-\varepsilon^2)}]/ (1-\varepsilon)^2\} \{\text{cosine } 2[\omega (m) + \omega (r)]\, t - i \sin 2[\omega (m) + \omega (r)]\, t\}$

And $\theta'(0, t) = \theta'(0, 0) \{1 - 2\text{sine}^2 [\omega (m)\, t + \omega (r)\, t]\}$

$- 2i\, \theta'(0, 0) \sin [\omega (m) + \omega(r)]\, t \text{ cosine } [\omega (m) + \omega(r)]\, t$

$\Delta \theta' (0, t) = \text{Real } \Delta \theta' (0, t) + \text{Imaginary } \Delta \theta (0, t)$

$\text{Real } \Delta \theta' (0, t) = \theta'(0, 0) \{1 - 2 \text{ sine}^2 [\omega (m)\, t\, \omega(r)\, t]\}$

Let W (ob) = $\Delta\ \theta'$ (0, t) (observed) = Real $\Delta\ \theta$ (0, t) - $\theta'(0, 0)$

$= -2\theta'(0, 0)\ \text{sine}^2\ [\omega\ (m)\ t + \omega(r)\ t]$

$= -2[2\pi\ [\sqrt{(1-\varepsilon^2)}]/T\ (1-\varepsilon)^2]\ \text{sine}^2\ [\omega\ (m)\ t + \omega(r)\ t]$

If this apsidal motion is to be found as visual effects, then

With, v ° = spin velocity; v* = orbital velocity; v°/c = tan ω (m) T°; v*/c = tan ω (r) T*

Where T° = spin period; T* = orbital period

And ω (m) T° = Inverse tan v°/c; ω (r) T* = Inverse tan v*/c

W (ob) = $-4\ \pi\ [\sqrt{(1-\varepsilon^2)}]/T\ (1-\varepsilon)^2]$ sine² [Inverse tan v°/c + Inverse tan v*/c] radians

Multiplication by 180/π

W° (ob) = (-720/T) $\{[\sqrt{(1-\varepsilon^2)}]/\ (1-\varepsilon)^2\}$ sine² {Inverse tan [v°/c + v*/c]/ [1 - v° v*/c²]}

Degrees and multiplication by 1 century = 36526 days and using T in days

Where Inverse tan [v°/c + v*/c]/ [1 - v° v*/c²] = Inverse tan v°/c + Inverse tan v*/c

W° (ob) = (-720x36526/Tdays) $\{[\sqrt{(1-\varepsilon^2)}]/\ (1-\varepsilon)^2\}$ x

sine² {Inverse tan [v°/c + v*/c]/ [1 - v° v*/c²]} degrees/100 years

Approximations I

With v° << c and v* << c, then v° v* <<< c² and [1 - v° v*/c²] ≈ 1

Then W° (ob) ≈ (-720x36526/Tdays) $\{[\sqrt{(1-\varepsilon^2)}]/\ (1-\varepsilon)^2\}$ x sine² Inverse tan [v°/c + v*/c] degrees/100 years

Approximations II

With v° << c and v* << c, then sine Inverse tan [v°/c + v*/c] ≈ (v° + v*)/c

W° (ob) = (-720x36526/Tdays) $\{[\sqrt{(1-\varepsilon^2)}]/\ (1-\varepsilon)^2\}$ x $[(v° + v^*)/c]^2$ degrees/100 years

This is the equation for axial rotations rate of planetary and binary stars or any two body problem.

The circumference of an ellipse: $2\pi a\ (1 - \varepsilon^2/4 + 3/16(\varepsilon^2)^2 - --.) \approx 2\pi a\ (1-\varepsilon^2/4)$; $R = a\ (1-\varepsilon^2/4)$

Finding orbital velocities

From Newton's inverse square law of an ellipse motion applied to a circular orbit gives the following: $m\ v^2/\ r\ (cm) = GmM/r^2$

Planet ----------- r (cm) ------------- Center of mass ---------- r (CM) --------- Mother Sun

Planet --- r ------------------------------------- Mother Sun

Center of mass law m r (cm) = M r (CM); m = planet mass; M = sun mass

And r (cm) = distance of planet to the center of mass

And r (CM) = distance of sun to center of mass

And r (cm) + r (CM) = r = distance between sun and planet

Solving to get: r (cm) = [M/ (m + M)] r

And r (CM) = [m/ (m + M)] r

Then $v^2 = [GM\ r\ (cm)/\ r^2] = GM^2/\ (m + M)\ r$

And $v = \sqrt{[GM^2/\ (m + M)\ r = a\ (1-\varepsilon^2/4)]}$

Planet orbital velocity or primary velocity:

And $v^* = v(m) = \sqrt{[GM^2/(m + M) a (1-\varepsilon^2/4)]}$ = 48.14 km for planet Mercury

Velocity of secondary or Mother Sun velocity

And $v^*(M) = \sqrt{[Gm^2 / (m + M) a (1-\varepsilon^2/4)]}$

Applications: mercury ellipse and its axis rotation of 43 " /century

1- Planet Mercury axial "apparent" rotation rate Einstein and Harvard MIT Cal-Tech and all of Modern physicists and NASA call time travel

$W(obo) = (-720x36526x3600/T) \{[\sqrt{(1-\varepsilon^2]}/(1-\varepsilon)^2\} (v^* + v°/c)^2$ seconds of arc per century

In planetary motion planets do no emit light and their spin rotations are very small

The circumference of an ellipse: $2\pi a (1 - \varepsilon^2/4 + 3/16(\varepsilon^2)^2 - --.) \approx 2\pi a (1-\varepsilon^2/4)$; $R = a (1-\varepsilon^2/4)$

Where $v^*(p) = \sqrt{[G M^2 / (m + M) a (1-\varepsilon^2/4)]} \approx \sqrt{[GM/a (1-\varepsilon^2/4)]}$; $m \ll M$; Solar system

Data: G = 6.673x10^-11; M = 2x10^30 kg; m =.32x10^24 kg

ε = 0.206; T = 88 days; c = 299792.458 km/sec; a = 58.2 km/sec; v° = 0.002 km/sec

Calculations yield: v* = 48.14 km/sec; $[\sqrt{(1-\varepsilon^2)}] (1-\varepsilon)^2 = 1.552$

W (ob) = (-720x36526x3600/88) x (1.552) $(48.14/299792)^2$ = 43.0"/century

2- Venus Advance of perihelion solution:

$W''(ob) = (-720x36526x3600/T) \{[\sqrt{(1-\varepsilon^2)}]/(1-\varepsilon)^2\} [(v° + v^*)/c]^2$ seconds/100 years

Data: T = 244.7 days v°= v° $_{(p)}$] = 6.52 km/sec; ε = 0.0.0068; v*(p) = 35.12

Calculations

$1-\varepsilon = 0.0068$; $(1-\varepsilon^2/4) = 0.99993$; $[\sqrt{(1-\varepsilon^2)}] / (1-\varepsilon)^2 = 1.00761$

G=6.673x10^-11; M $_{(0)}$ = 1.98892x19^30 kg; R = 108.2x10^9 m

$V^*(p) = \sqrt{[GM^2/(m + M) a (1-\varepsilon^2/4)]}$ = 41.64 km/sec

Advance of perihelion of Venus motion is given by this formula:

$W''(ob) = (-720x36526x3600/T) \{[\sqrt{(1-\varepsilon^2)}]/(1-\varepsilon)^2]\} [(v° + v^*)/c]^2$ seconds/100 years

$W''(ob) = (-720x36526x3600/T) \{[\sqrt{(1-\varepsilon^2)}]/(1-\varepsilon)^2\}$ sine² [Inverse tan 41.64/300,000]

$= (-720x36526x3600/224.7) (1.00762) (41.64/300,000)^2$

W" (observed) = 8.2"/100 years; observed 8.4"/100years

This is an excellent result within the scientific errors

Conclusion:

Nahhas' solution of planetary motions is given by this new formula:

Given as: $r = r(\theta, t) = [a (1-\varepsilon^2)/(1 + \varepsilon \text{ cosine } \theta)] e^{[\lambda(r) + i\, \omega(r)] t}$

And v* is orbital velocity, v° = spin velocity

T = period of orbit; ε = eccentricity; θ = angle of rotation

With "apparent" axial rotation rate of:
$W (obo) = (-720x36526x3600/T) \{[\sqrt{(1-\varepsilon^2}]/ (1-\varepsilon)^2\} [(v^* + v°)/c]^2$ seconds of arc per Century.

It is not just that relativity theory is wrong but all of physics is wrong for past 400 years. Physics is solved in event time and when real time physics solution is applied there is nothing said or published that can come close to its accuracy because it is the formula that matches experiments.

Finally, I took all of relativity theory experimental proofs and showed that all these experimental proofs amount to nothing! The Name is Joe Alexander Nahhas and I am here for change, a regime change!