

## Relativity Failures nail # 3: V1143Cygni binary stars apsidal motion

The Problem that Einstein and the 100,000 Space - time physicists could not solve by space-time physics or any said or published physics

### Binary Stars Apsidal Motion Puzzle Solution

By Professor Joe Nahhas 1985

[joenahhas1958@yahoo.com](mailto:joenahhas1958@yahoo.com)



Greetings: My name is **Joe Nahhas**. I am the founder of **real time physics** July 4th, 1973  
It is the fact that not only Einstein is wrong but all 100,000 living physicists are wrong and the 100,000 passed away physicists were wrong because physics is wrong for past 350 years. **This is the problem where relativity theory collapsed.** The simplest problem in all of physics is the two body problem where two eclipsing stars in motion in front of modern telescopes and computerized equipment taking data and said "NO" to relativity. For 350 years Newton's equations were solved wrong and the new solution is a real time physics solution of  $r(\theta, t) = [a(1-\epsilon^2)/(1+\epsilon \cos \theta)] e^{[\lambda(r) + i\omega(r)]t}$

That gave Apsidal rate better than anything said or published in all of physics of:  
 $W^\circ(\text{Cal}) = (-720 \times 36526/T) \{[\sqrt{1-\epsilon^2}]/(1-\epsilon^2)\} [(v^\circ + v^*)/c]^2 \text{ degrees}/100 \text{ years}$

Abstract: This is the solution to the 40 years most studied eclipsing detached binary stars with high rate orbit axial rotations puzzle that made astrophysicists wipe their glasses and wipe their high tech telescopes eyepieces and sent Einstein's space-time physics research papers solutions back to sender and said "NO" to the 100,000 space-time Physicists and Astrophysicists in their hideouts after they could not solve this motion puzzle by any said or published Physics for forty years including 109 years of Nobel Prize winner Physics and physicists and 400 years of astronomy. This motion puzzle is posted Smithsonian-NASA website SAO/NASA and type "apsidal motion of V1143Cygni". From all close by binary stars systems astronomers picked up a few dozen sets of binary stars that can be a good test of general relativity theory and space-time confusion of physics and relativity theory failed everyone of them. Here is the solution to the most puzzling motion of all time solved by New real time physics solution or Newton's time dependent equation derived below.

The problem is:

$$\text{With } d^2(mr)/dt^2 - (mr)\theta'^2 = -GmM/r^2 \quad \text{Newton's Gravitational Equation} \quad (1)$$

$$\text{And } d(m^2r^2\theta')/dt = 0 \quad \text{Central force law} \quad (2)$$

$$\text{Newton's solution is: } r(\theta) = [a(1-\epsilon^2)/(1+\epsilon \cos \theta)]$$

This Newton's solution is given wrong for 350 years

The motion of DI Herculis binary star system given by Nahhas' Equation

$$\text{The correct solution is: } r(\theta, t) = [a(1-\epsilon^2)/(1+\epsilon \cos \theta)] e^{[\lambda(r) + i\omega(r)]t}$$

This rate of "apparent" axial rotation is given by this new equation

$$W^\circ(\text{Cal}) = (-720 \times 36526/T) \{[\sqrt{1-\epsilon^2}]/(1-\epsilon)^2\} [(v^\circ + v^*)/c]^2 \text{ degrees/100 years}$$

$$W^\circ(\text{observed}) = 1.24^\circ/\text{century} \pm 0.05^\circ/\text{century}; \text{relativity} = 4.7^\circ/\text{century}$$

With m = mass p = primary s = secondary

T = period;  $\epsilon$  = eccentricity;  $v^\circ$  = spin velocity effect;  $v^*$  = orbital velocity effect

For DI Herculis:

$$\text{With } v^* + v^\circ = 114.85 \text{ km/s.}$$

And  $v^\circ = 0 \text{ km/s}$  = the sum spin velocities of primary and secondary stars.

$$\text{And } v^* = 114.85 \text{ km/sec} = [v^*(p) + v^*(s)]/2$$

$$\text{Then } W^\circ(\text{calculated}) = 1.22^\circ/\text{century}$$

$$\text{The } W^\circ(\text{observed}) = 1.24^\circ \text{ as reported by Khalullin}$$

**Real time Universal Mechanics Solution:** For 350 years Physicists Astronomers and Mathematicians missed Kepler's time dependent equation introduced here and transformed Newton's equation into a time dependent Newton' equation and together these two equations explain apsidal motion as "apparent" light aberrations visual effects along the line of sight due to differences between time dependent measurements and time independent measurements These two equations combines classical mechanics and quantum mechanics into one Universal mechanics solution and in practice it amounts to measuring light aberrations of moving objects of angular velocity at Apses.

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

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

$$\begin{aligned} \mathbf{P} &= d \mathbf{S} / d t = m (d \mathbf{r} / d t) + (d m / d t) \mathbf{r} = \text{Total momentum} \\ &= \text{change of location} + \text{change of mass} \\ &= m \mathbf{v} + m' \mathbf{r}; \mathbf{v} = \text{velocity} = d \mathbf{r} / d t; m' = \text{mass change rate} \end{aligned}$$

$$\begin{aligned} \mathbf{F} &= d \mathbf{P} / d t = d^2 \mathbf{S} / d t^2 = \text{Total force} \\ &= m (d^2 \mathbf{r} / d t^2) + 2(d m / d t) (d \mathbf{r} / d t) + (d^2 m / d t^2) \mathbf{r} \\ &= m \boldsymbol{\gamma} + 2m' \mathbf{v} + m'' \mathbf{r}; \boldsymbol{\gamma} = \text{acceleration}; m'' = \text{mass acceleration rate} \end{aligned}$$

In polar coordinates system

We Have  $\mathbf{r} = r \mathbf{r}(\theta)$ ;  $\mathbf{v} = r' \mathbf{r}(\theta) + r \theta' \boldsymbol{\theta}(\theta)$ ;  $\boldsymbol{\gamma} = (r'' - r\theta'^2) \mathbf{r}(\theta) + (2r'\theta' + r\theta'') \boldsymbol{\theta}(\theta)$

$\mathbf{r}$  = location;  $\mathbf{v}$  = velocity;  $\boldsymbol{\gamma}$  = acceleration

$$\mathbf{F} = m \boldsymbol{\gamma} + 2m' \mathbf{v} + m'' \mathbf{r}$$

$$\begin{aligned} \mathbf{F} &= m [(r'' - r\theta'^2) \mathbf{r}(\theta) + (2r'\theta' + r\theta'') \boldsymbol{\theta}(\theta)] + 2m' [r' \mathbf{r}(\theta) + r \theta' \boldsymbol{\theta}(\theta)] + (m'' \mathbf{r}) \mathbf{r}(\theta) \\ &= [d^2(mr) / d t^2 - (mr) \theta'^2] \mathbf{r}(\theta) + (1/mr) [d(m^2 r^2 \theta') / d t] \boldsymbol{\theta}(\theta) \\ &= [-GmM/r^2] \mathbf{r}(\theta) \text{ ----- Newton's Gravitational Law} \end{aligned}$$

Proof:

$$\text{First } \mathbf{r} = r [\cos \theta \hat{\mathbf{i}} + \sin \theta \hat{\mathbf{j}}] = r \mathbf{r}(\theta)$$

$$\text{Define } \mathbf{r}(\theta) = \cos \theta \hat{\mathbf{i}} + \sin \theta \hat{\mathbf{j}}$$

$$\begin{aligned} \text{Define } \mathbf{v} &= d \mathbf{r} / d t = r' \mathbf{r}(\theta) + r d[\mathbf{r}(\theta)] / d t \\ &= r' \mathbf{r}(\theta) + r \theta' [-\sin \theta \hat{\mathbf{i}} + \cos \theta \hat{\mathbf{j}}] \\ &= r' \mathbf{r}(\theta) + r \theta' \boldsymbol{\theta}(\theta) \end{aligned}$$

$$\text{Define } \boldsymbol{\theta}(\theta) = -\sin \theta \hat{\mathbf{i}} + \cos \theta \hat{\mathbf{j}};$$

$$\text{And with } \mathbf{r}(\theta) = \cos \theta \hat{\mathbf{i}} + \sin \theta \hat{\mathbf{j}}$$

$$\text{Then } d[\boldsymbol{\theta}(\theta)] / d t = \theta' [-\cos \theta \hat{\mathbf{i}} - \sin \theta \hat{\mathbf{j}}] = -\theta' \mathbf{r}(\theta)$$

$$\text{And } d[\mathbf{r}(\theta)] / d t = \theta' [-\sin \theta \hat{\mathbf{i}} + \cos \theta \hat{\mathbf{j}}] = \theta' \boldsymbol{\theta}(\theta)$$

$$\begin{aligned} \text{Define } \boldsymbol{\gamma} &= d [r' \mathbf{r}(\theta) + r \theta' \boldsymbol{\theta}(\theta)] / d t \\ &= r'' \mathbf{r}(\theta) + r' d[\mathbf{r}(\theta)] / d t + r' \theta' \mathbf{r}(\theta) + r \theta'' \boldsymbol{\theta}(\theta) + r \theta' d[\boldsymbol{\theta}(\theta)] / d t \\ \boldsymbol{\gamma} &= (r'' - r\theta'^2) \mathbf{r}(\theta) + (2r'\theta' + r\theta'') \boldsymbol{\theta}(\theta) \end{aligned}$$

$$\text{With } d^2(mr) / d t^2 - (mr) \theta'^2 = -GmM/r^2 \text{ Newton's Gravitational Equation} \quad (1)$$

$$\text{And } d(m^2 r^2 \theta') / d t = 0 \text{ Central force law} \quad (2)$$

$$(2): d(m^2 r^2 \theta') / d t = 0$$

Then  $m^2 r^2 \theta' = \text{constant}$

$$\begin{aligned} &= H(0, 0) \\ &= m^2(0, 0) h(0, 0); h(0, 0) = r^2(0, 0) \theta'(0, 0) \\ &= m^2(0, 0) r^2(0, 0) \theta'(0, 0); h(\theta, 0) = [r^2(\theta, 0)] [\theta'(\theta, 0)] \\ &= [m^2(\theta, 0)] h(\theta, 0); h(\theta, 0) = [r^2(\theta, 0)] [\theta'(\theta, 0)] \\ &= [m^2(\theta, 0)] [r^2(\theta, 0)] [\theta'(\theta, 0)] \\ &= [m^2(\theta, t)] [r^2(\theta, t)] [\theta'(\theta, t)] \\ &= [m^2(\theta, 0) m^2(0, t)] [r^2(\theta, 0) r^2(0, t)] [\theta'(\theta, t)] \end{aligned}$$

$$= [m^2(\theta, 0) m^2(0,t)] [r^2(\theta,0)r^2(0,t)] [\theta'(\theta, 0) \theta' (0, t)]$$

With  $m^2r^2\theta' = \text{constant}$

Differentiate with respect to time

$$\text{Then } 2mm'r^2\theta' + 2m^2rr'\theta' + m^2r^2\theta'' = 0$$

Divide by  $m^2r^2\theta'$

$$\text{Then } 2 (m'/m) + 2(r'/r) + \theta''/\theta' = 0$$

This equation will have a solution  $2 (m'/m) = 2[\lambda (m) + i \omega (m)]$

$$\text{And } 2(r'/r) = 2[\lambda (r) + i \omega (r)]$$

$$\text{And } \theta''/\theta' = -2\{\lambda (m) + \lambda (r) + i [\omega (m) + \omega (r)]\}$$

$$\text{Then } (m'/m) = [\lambda (m) + i \omega (m)]$$

$$\text{Or } d m/m d t = [\lambda (m) + i \omega (m)]$$

$$\text{And } dm/m = [\lambda (m) + i \omega (m)] d t$$

$$\text{Then } m = m (0) e^{[\lambda (m) + i \omega (m)] t}$$

$$m = m (0) m (0, t); m (0, t) e^{[\lambda (m) + i \omega (m)] t}$$

With initial spatial condition that can be taken at  $t = 0$  anywhere then  $m (0) = m (\theta, 0)$

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

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

Similarly we can get

$$\text{Also, } r = r (\theta, 0) r (0, t) = r (\theta, 0) e^{[\lambda (r) + i \omega (r)] t}$$

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

$$\text{Then } \theta'(\theta, t) = \{H(0, 0)/[m^2(\theta,0) r(\theta,0)]\} e^{-2\{[\lambda(m) + \lambda(r)] + i [\omega(m) + \omega(r)]\}t} \text{-----I}$$

$$\text{And } \theta'(\theta, t) = \theta' (\theta, 0) e^{-2\{[\lambda (m) + \lambda(r)] + i [\omega (m) + \omega (r)]\} t} \text{-----I}$$

$$\text{And, } \theta'(\theta, t) = \theta' (\theta, 0) \theta' (0, t)$$

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

$$\text{Also } \theta'(\theta, 0) = H (0, 0)/ m^2 (\theta, 0) r^2 (\theta, 0)$$

$$\text{And } \theta'(0, 0) = \{H (0, 0)/ [m^2 (0, 0) r (0, 0)]\}$$

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

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

Let  $m r = 1/u$

$$\text{Then } d (m r)/d t = -u'/u^2 = - (1/u^2) (\theta') d u/d \theta = (- \theta'/u^2) d u/d \theta = -H d u/d \theta$$

$$\text{And } d^2 (m r)/dt^2 = -H\theta'd^2u/d\theta^2 = -Hu^2 [d^2u/d\theta^2]$$

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

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

$$t = 0; m^3 (0, 0) = 1$$

$$u = Gm^3 (\theta, 0) M/ H^2 + A \text{ cosine } \theta = Gm (\theta, 0) M (\theta, 0)/ h^2 (\theta, 0)$$

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

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

$$= [h^2/Gm (\theta, 0) M (\theta, 0)] / (1 + \epsilon \cos \theta)$$

Then  $m (\theta, 0) r (\theta, 0) = [a (1-\epsilon^2) / (1 + \epsilon \cos \theta)] m (\theta, 0)$

Dividing by  $m (\theta, 0)$

Then  $r (\theta, 0) = a (1-\epsilon^2) / (1 + \epsilon \cos \theta)$

This is Newton's Classical Equation solution of two body problem which is the equation of an ellipse of semi-major axis of length  $a$  and semi minor axis  $b = a \sqrt{1 - \epsilon^2}$  and focus length  $c = \epsilon a$

And  $m r = m (\theta, t) r (\theta, t) = m (\theta, 0) m (0, t) r (\theta, 0) r (0, t)$

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

This is Newton's time dependent equation that is missed for 350 years

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

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

And  $m = m (\theta, 0) e^{+i \omega (m) t} = m (\theta, 0) e^{i \omega (m) t}$

We Have  $\theta'(0, 0) = h (0, 0) / r^2 (0, 0) = 2\pi ab / T a^2 (1-\epsilon)^2$   
 $= 2\pi a^2 [\sqrt{1-\epsilon^2}] / T a^2 (1-\epsilon)^2$   
 $= 2\pi [\sqrt{1-\epsilon^2}] / T (1-\epsilon)^2$

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

Then  $\theta'(0, t) = \theta'(0, 0) \{1 - 2 \sin^2 [\omega (m) t + \omega (r) t]\}$   
 $- 2i \theta'(0, 0) \sin [\omega (m) + \omega (r)] t \cos [\omega (m) + \omega (r)] t$

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

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

Let  $W (\text{cal}) = \Delta \theta' (0, t) (\text{observed}) = \text{Real } \Delta \theta (0, t) - \theta'(0, 0)$   
 $= -2\theta'(0, 0) \sin^2 [\omega (m) t + \omega (r) t]$   
 $= -2[2\pi [\sqrt{1-\epsilon^2}] / T (1-\epsilon)^2] \sin^2 [\omega (m) t + \omega (r) t]$   
 And  $W (\text{cal}) = -4\pi [\sqrt{1-\epsilon^2}] / T (1-\epsilon)^2 \sin^2 [\omega (m) t + \omega (r) t]$

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

With,  $v^\circ = \text{spin velocity}$ ;  $v^* = \text{orbital velocity}$ ;  $v^\circ/c = \tan \omega (m) T^\circ$ ;  $v^*/c = \tan \omega (r) T^*$   
 Where  $T^\circ = \text{spin period}$ ;  $T^* = \text{orbital period}$

And  $\omega (m) T^\circ = \text{Inverse tan } v^\circ/c$ ;  $\omega (r) T^* = \text{Inverse tan } v^*/c$

$W (\text{ob}) = -4 \pi [\sqrt{1-\epsilon^2}] / T (1-\epsilon)^2 \sin^2 [\text{Inverse tan } v^\circ/c + \text{Inverse tan } v^*/c] \text{ radians}$

Multiplication by  $180/\pi$

$W (\text{ob}) = (-720/T) \{[\sqrt{1-\epsilon^2}] / (1-\epsilon)^2\} \sin^2 \{ \text{Inverse tan } [v^\circ/c + v^*/c] / [1 - v^\circ v^*/c^2] \}$   
 degrees and multiplication by 1 century = 36526 days and using T in days

$$W^\circ(\text{ob}) = (-720 \times 36526 / T_{\text{days}}) \left\{ \frac{\sqrt{1-\epsilon^2}}{(1-\epsilon)^2} \right\} \times \sin^2 \left\{ \text{Inverse tan} \left[ \frac{v^\circ/c + v^*/c}{[1 - v^\circ v^*/c^2]} \right] \right\} \text{ degrees/100 years}$$

### Approximations I

With  $v^\circ \ll c$  and  $v^* \ll c$ , then  $v^\circ v^* \ll c^2$  and  $[1 - v^\circ v^*/c^2] \approx 1$

Then  $W^\circ(\text{ob}) \approx (-720 \times 36526 / T_{\text{days}}) \left\{ \frac{\sqrt{1-\epsilon^2}}{(1-\epsilon)^2} \right\} \times \sin^2 \text{Inverse tan} [v^\circ/c + v^*/c]$   
degrees/100 years

### Approximations II

With  $v^\circ \ll c$  and  $v^* \ll c$ , then  $\sin \text{Inverse tan} [v^\circ/c + v^*/c] \approx (v^\circ + v^*)/c$

$W^\circ(\text{ob}) = (-720 \times 36526 / T_{\text{days}}) \left\{ \frac{\sqrt{1-\epsilon^2}}{(1-\epsilon)^2} \right\} \times [(v^\circ + v^*)/c]^2 \text{ degrees/100 years}$

This is the equation that gives the correct apsidal motion rates -----III

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

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

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

Looking from top or bottom at two stars they either spin in clock ( $\uparrow$ ) wise or counter clockwise ( $\downarrow$ )

Looking from top or bottom at two stars they either approach each other coming from the top ( $\uparrow$ ) or from the bottom ( $\downarrow$ )

Knowing this we can construct a table and see how these two stars are formed. There are many combinations of velocity additions and subtractions and one combination will give the right answer.

**V1143Cygni Spin - Orbit velocities Table:**

Primary → Secondary ↓	$v^\circ(p) \uparrow v^*(p) \uparrow$	$v^\circ(p) \uparrow v^*(p) \downarrow$	$v^\circ(p) \downarrow v^*(p) \uparrow$	$v^\circ(p) \downarrow v^*(p) \downarrow$
$v^\circ(s) \uparrow v^*(s) \uparrow$	Spin= $[\uparrow, \uparrow]$ $[\uparrow, \uparrow]$ =orbit	$[\uparrow, \uparrow][\downarrow, \uparrow]$	$[\downarrow, \uparrow][\uparrow, \uparrow]$	$[\downarrow, \uparrow][\downarrow, \uparrow]$
Spin results	$v^\circ(p) + v^\circ(s)$	$v^\circ(p) + v^\circ(s)$	$-v^\circ(p) + v^\circ(s)$	$-v^\circ(p) + v^\circ(s)$
Orbit results	$v^*(p) + v^*(s)$	$-v^*(p) + v^*(s)$	$v^*(p) + v^*(s)$	$-v^*(p) + v^*(s)$
Examples				
$v^\circ(s) \uparrow v^*(s) \downarrow$	$[\uparrow, \uparrow][\uparrow, \downarrow]$	$[\uparrow, \uparrow][\downarrow, \downarrow]$	$[\downarrow, \uparrow][\uparrow, \downarrow]$	$[\downarrow, \uparrow][\downarrow, \downarrow]$
Spin results	$v^\circ(p) + v^\circ(s)$	$v^\circ(p) + v^\circ(s)$	$-v^\circ(p) + v^\circ(s)$	$-v^\circ(p) + v^\circ(s)$
Orbit results	$v^*(p) - v^*(s)$	$-v^*(p) - v^*(s)$	$v^*(p) - v^*(s)$	$-v^*(p) - v^*(s)$
Examples				
$v^\circ(p) \downarrow v^*(s) \uparrow$	$[\uparrow, \downarrow][\uparrow, \uparrow]$	$[\uparrow, \downarrow][\downarrow, \uparrow]$	$[\downarrow, \downarrow][\uparrow, \uparrow]$	$[\downarrow, \downarrow][\downarrow, \uparrow]$
Spin results	$v^\circ(p) - v^\circ(s)$	$v^\circ(p) - v^\circ(s)$	$-v^\circ(p) - v^\circ(s)$	$-v^\circ(p) - v^\circ(s)$
Orbit results	$v^*(p) + v^*(s)$	$-v^*(p) + v^*(s)$	$v^*(p) + v^*(s)$	$-v^*(p) + v^*(s)$
Examples				
$v^\circ(s) \downarrow v^*(s) \downarrow$	$[\uparrow, \downarrow][\uparrow, \downarrow]$	$[\uparrow, \downarrow][\downarrow, \downarrow]$	$[\downarrow, \downarrow][\uparrow, \downarrow]$	$[\downarrow, \downarrow][\downarrow, \downarrow]$
Spin results	$v^\circ(p) - v^\circ(s)$	$v^\circ(p) - v^\circ(s)$	$-v^\circ(p) - v^\circ(s)$	$-v^\circ(p) - v^\circ(s)$
Orbit results	$v^*(p) - v^*(s)$	$-v^*(p) - v^*(s)$	$v^*(p) - v^*(s)$	$-v^*(p) - v^*(s)$
Examples				

1- Advance of Perihelion of mercury. [No spin factor] Because data are given with no spin factor

$$G=6.673 \times 10^{-11}; M=2 \times 10^{30} \text{ kg}; m=.32 \times 10^{24} \text{ kg}; \epsilon = 0.206; T=88 \text{ days}$$

$$\text{And } c = 299792.458 \text{ km/sec}; a = 58.2 \text{ km/sec}; 1-\epsilon^2/4 = 0.989391$$

$$\text{With } v^\circ = 2 \text{ meters/sec}$$

$$\text{And } v^* = \sqrt{[GM/a (1-\epsilon^2/4)]} = 48.14 \text{ km/sec}$$

$$\text{Calculations yields: } v = v^* + v^\circ = 48.14 \text{ km/sec (mercury)}$$

$$\text{And } [\sqrt{(1-\epsilon^2)}] (1-\epsilon)^2 = 1.552$$

$$W''(\text{ob}) = (-720 \times 36526 \times 3600/T) \{[\sqrt{(1-\epsilon^2)}] / (1-\epsilon)^2\} (v/c)^2$$

$$W''(\text{ob}) = (-720 \times 36526 \times 3600/88) \times (1.552) (48.14/299792)^2 = 43.0''/\text{century}$$

This is the rate of for the advance of perihelion of planet mercury explained as "apparent" without the use of fictional forces or fictional universe of space-time confusions of physics of relativity.

### Venus Advance of perihelion solution:

$$W''(\text{ob}) = (-720 \times 36526 \times 3600/T) \{[\sqrt{(1-\epsilon^2)}] / (1-\epsilon)^2\} [(v^\circ + v^*)/c]^2 \text{ seconds}/100 \text{ years}$$

$$\text{Data: } T=244.7 \text{ days } v^\circ = v^\circ(p) = 6.52 \text{ km/sec}; \epsilon = 0.0068; v^*(p) = 35.12$$

Calculations

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

$$G=6.673 \times 10^{-11}; M_{(0)} = 1.98892 \times 10^{30} \text{kg}; R = 108.2 \times 10^9 \text{m}$$

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

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

$$W''(\text{ob}) = (-720 \times 36526 \times 3600 / T) \{ [\sqrt{(1 - \epsilon^2)}] / (1 - \epsilon)^2 \} [(v^\circ + v^*) / c]^2 \text{ seconds/100 years}$$

$$W''(\text{ob}) = (-720 \times 36526 \times 3600 / T) \{ [\sqrt{(1 - \epsilon^2)}] / (1 - \epsilon)^2 \} \text{ sine}^2 [\text{Inverse tan } 41.64 / 300,000] \\ = (-720 \times 36526 \times 3600 / 224.7) (1.00762) (41.64 / 300,000)^2$$

$$W''(\text{observed}) = 8.2'' / 100 \text{ years; observed } 8.4'' / 100 \text{ years}$$

Next the same equation will be used to find the advance of Periastron or "apparent" apsidal motion of V1143 Cygni binary stars system. This Binary stars system had been the one binary stars system that had changed data values for past 50 years.

I am going to show how both answers can be obtained.

### 3-V1143 Cygni Apsidal Motion Solution

$$W^\circ(\text{ob}) = (-720 \times 36526 / T) \{ [\sqrt{(1 - \epsilon^2)}] / (1 - \epsilon)^2 \} [(v^\circ + v^*) / c]^2 \text{ degrees/100 years}$$

V1143 data

$$T = 7.641 \text{ days} \quad r_{(m)} = 0.059 \quad m = 1.391 M_{(0)} \quad R(1) = 1.346 R_{(0)} \quad [v^\circ_{(m)}, v^\circ_{(M)}] = [18, 28] \\ \epsilon = 0.54 \quad r_{(M)} = 0.058 \quad M = 1.347 M_{(0)} \quad R(2) = 1.323 R_{(0)} \quad [v^\circ_{(m)}, v^\circ_{(M)}] = [21, 28]$$

$$M + m = 2.738 \text{ Distance} = 38 \pm 2 \text{ parsec} = 3.262 \times [38 \pm 2 \text{ parsec}] = 123.956 \pm 6.524 \text{ Ly}$$

$$1 - \epsilon = 0.46 \quad 1 - \epsilon^2/4 = 0.9721 \quad R(0) = .696 \times 10^9 \text{m} \quad a = [R(1) / r(m)] R(0) = 15.87823729 \times 10^9 \text{m}$$

$$1 + \epsilon = 1.54$$

$$\text{With } v(p) = \sqrt{[GM^2 / (m + M) a (1 - \epsilon)]} = 110 \text{ km/sec}$$

$$\text{And } v(p) = \sqrt{[GM^2 / (m + M) a (1 + \epsilon)]} = 60 \text{ km/sec}$$

$$K(A) = (110 + 60) / 2 = 170 / 2 = 85 \text{ km/sec}$$

$$\text{With } v(s) = \sqrt{[Gm^2 / (m + M) a (1 - \epsilon)]} = 113.6 \text{ km/sec}$$

$$\text{And } v(s) = \sqrt{[Gm^2 / (m + M) a (1 + \epsilon)]} = 62 \text{ km/sec}$$

$$K(A) = (113.6 + 62) / 2 = 175.6 / 2 = 87.8 \text{ km/sec}$$

$$\text{With } v(1) = \sqrt{[GM^2 / (m + M) a]} = 74.632 \text{ km/sec}$$

$$\text{And } v(2) = \sqrt{[Gm^2 / (m + M) a]} = 77.0699 \text{ km/sec}$$

$$1 - \text{With } v^\circ [21, 28] = 28 - 21 = 7$$

$$2 - \text{With } v^\circ [18, 28] = 28 - 18 = 10$$

$$3 - \text{Taking average } 10 + 7 / 2 = 8.5$$



With  $v(m) = \sqrt{[GM^2/(m+M)a(1-\epsilon^2/4)]} = 77.5126 \text{ km/s}$   
 And  $v(M) = \sqrt{[Gm^2/(m+M)a(1-\epsilon^2/4)]} = 80.00448 \text{ km/s}$   
 Also,  $[\sqrt{(1-\epsilon^2)}]/(1-\epsilon)^2 = 3.977622971$   
 With  $v^*(cm) = \sum m v / \sum m = 78.73851759$ ;  $2 v^*(cm) = 157.4770 \text{ km/sec}$

And  $\sigma = \sqrt{\{\sum [v^*-v^*(cm)]^2/2\}} = \sqrt{\{[77.5126 - 78.7385]^2/2\} + \{[80.0048 - 78.7385]^2/2\}}$   
 $= \sqrt{\{(1.22591759)^2 + (1.2663)^2/2\}} = 1.24 \text{ km/sec}$

Now:

With 1-  $v^\circ + v^* = 157.51648 \text{ km/sec} - \underline{10 \text{ km/sec}} = 147.51648 \text{ km/sec}$

And 2-  $v^\circ + v^* = 157.51648 \text{ km/sec} - \underline{8.5 \text{ km/sec}} = 149.01648 \text{ km/sec}$

And 3-  $v^\circ + v^* = 157.51648 \text{ km/sec} - \underline{7 \text{ km/sec}} = 150.51648 \text{ km/sec}$

$W^\circ(\text{obo}) = (-720 \times 36526/T) \times \{[\sqrt{(1-\epsilon^2)}]/(1-\epsilon)^2\} \{[v^* + v^\circ]/c\}^2$

1-  $W^\circ/\text{century} = (-720 \times 36526/7.641) (3.977622951) (147.51648/300,000)^2 = 3.31^\circ/\text{century}$

2-  $W^\circ/\text{century} = (-720 \times 36526/7.641) (3.977622951) (149.01648/300,000)^2 = 3.3778^\circ/\text{century}$

3-  $W^\circ/\text{century} = (-720 \times 36526/7.641) (3.977622951) (150.51648/300,000)^2 = 3.44614561^\circ/\text{century}$

With  $v^* = 2 v^*(cm) = 157.4770 \text{ km/sec}$

And  $v^\circ = v^\circ(p) - v^\circ(s) = 21 - 28 = -7 \text{ km/sec}$

Then  $v^* + v^\circ(p) = 157.477 - 7 = 150.477 \text{ km/sec}$

**$W^\circ/\text{century} = (-720 \times 36526/7.641) (3.977622951) (150.477/300,000)^2 = 3.44^\circ/\text{century}$**

Observed values are:  $W^\circ = 3.393987698^\circ/\text{century}$ ;  $W^\circ = 3.489592985^\circ/\text{century}$

Average observed:  **$3.44^\circ/\text{century}$**

References:

1-Geminez and Margrave, 1985

$[0.00071^\circ/\text{cycle}] = [1 \text{ century} = 36526 \text{ days}/7.641 \text{ days}] = 3.393987698^\circ/\text{century}$

2- Anderson and Nordstrom and Garcia and Geminez 1987:  $0.00073^\circ/\text{cycle}$

$[0.00073^\circ/\text{cycle}] = [1 \text{ century} = 36526 \text{ days}/7.641 \text{ days}] = 3.489592985^\circ/\text{century}$

**Relativity theory:  $4.254435283^\circ/\text{century} = 0.00089^\circ/\text{cycle}$**

joenahas1958@yahoo.com

all rights reserved