# Metonic and Saros Cycles Harmony Reason <br> By Gerges Francis Twadrous <br> $2^{\text {nd }}$ course student - Physics Department - Physics \& Math Faculty Peoples' Friendship University - Moscow - Russia -2010-2013 <br> TEL +201022532292 georgytawdrous@yandex.ru / mrwaheid@ gmail.com 

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## Abstract

Metonic and Saros Cycles Harmony proves there's a geometrical structure unifies and connects all solar planets.

This papers tries to answer the following question...
Why Metonic Cycle period 6939.75 days $=$ Saros Cycle Period 6585.4 days + Synodic year 354.39 days?

## 1- Introduction

In all my papers I try to prove just one idea, that
The solar planets data are created depending on each other, that because the solar group is one machine or one body.

The idea simply tells us that, the solar planets data are found based on a geometrical structure connects all solar planets together, that's why any solar planet data depends on others'...
For example, if we found 3 angles their total $=180$ degrees we may conclude that these 3 angles are triangle angles...
Similar to that .... I found
687 days $($ Mars orbital period) $=365.25$ days $($ Earth orbital period) x 1.9 (Mars orbital inclination $=1.9$ degrees)

The previous relationship between Mars and Earth is considered as Pure coincidence by the current theories, but I try to prove that this relationship is found because there's a geometrical structure connects Earth with Mars and causes this relationship.

## Let's summarize the idea:

- A geometrical structure connects and unifies all solar planets together to make the solar group as one body or one machine. And this geometrical structure causes each planet data to be created depending on other planets data which guarantees the planets motions harmony with each other.

Now the idea is almost clear, but questions are needed to be solved..!
1- What's this geometrical structure which unifies the solar planets?
2- How this geometrical structure can be found?
Let's start by answer the $2^{\text {nd }}$ question: How this structure can be found?
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The solar group is created from one energy
i.e.

The solar planet matter is created from this Energy as the Equation ( $\mathrm{E}=\mathrm{mc}^{2}$ ) tells us, and the planet orbital distance is created also from this same Energy (my hypothesis), Let's see that in details...
Suppose the Energy started her trajectory from the sun toward Mercury
(this supposition is for explanation only because the Energy real trajectory is more complex)

The Energy will build Mercury orbital distance (Distance =Energy) and then the same energy will build Mercury Matter (Matter = Energy), So Mercury diameter and Mass should be related to Mercury orbital distance
Then the Energy causes Mercury motion, and then the Energy travels toward Venus, where in her trajectory will build Mercury Venus Distance, then will build Venus Matter, and causes Venus Motion to be in Harmony with Mercury Motion... etc

So, how this geometrical structure can be found? By the Energy which creates the matter, distances and motions... this same energy needs geometrical structure to use all solar planets in one machine...
So, the geometrical structure is a fact and necessity.....means, if the solar group is created from one Energy, that means there's a geometrical structure controls all these planets data ...

Now let's try to answer the $1^{\text {st }}$ question...
What's this geometrical structure, which unifies the solar planets?
This is the hard question, I don't know yet this geometrical structure and I try to reach to him
In fact I face real difficulties in my way.... basically because we don't know this geometrical structure rules..

For Example I found an Equation
$\mathrm{d}^{2}=4 \mathrm{~d}_{\mathrm{o}}\left(\mathrm{d}-\mathrm{d}_{\mathrm{o}}\right)$
where
d = Planet orbital distance
$\mathrm{d}_{0}=$ Previous Planet orbital distance
So, if we use Jupiter and Saturn orbital distances in the previous equation we'll find that it's correct Equation..
(in Fact there are 3 exceptions for this Equation)
Any way the question is why?
Why Jupiter and Saturn orbital distances follow the previous equation?
It's a geometrical rule, but why this rule is found? No one can answer!
Let's see another example
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The light with velocity c $(=0.3 \mathrm{mkm} / \mathrm{sec})$ will travel a distance $2088 \mathbf{m k m}$ (Jupiter Uranus distance) during 6939.75 seconds (but Metonic Cycle is 6939.75 days!)
Also
The light with velocity $\mathrm{c}(=0.3 \mathrm{mkm} / \mathrm{sec}$ ) will travel a distance 627 mkm (Jupiter Earth distance) during 2088 seconds

This geometrical rule or feature I found frequently...
The same value is used in time units and distance units!?
This feature I found frequently in the solar group... why the same value is used in time and distance units?!!
It's a geometrical rule but we don't know this rule and we don't understand its reason... In fact the solar group geometry is beyond our Geometry books

I wish I explained my idea as clear as possible...
In this paper I try to show and prove that,
Metonic and Saros cycles harmony depends on the geometrical structure which unifies all solar planets.
i.e.

Metonic and Saros cycles harmony proves there's a geometrical structure which unifies all solar planets.

## 2- Methodology

I use the same research Method in all my papers... Please review any of my previous papers
3- Data Harmony proves the geometrical structure existence
3-1 Sidereal And Nodal Year
3-2 Light Motion
3-3 The Sun Data
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## 3-1 Sidereal And Nodal Year

I- Data
1-346.6 days (Nodal year) $=327.6$ days (lunar sidereal year) +19
2- 354.39 days (Synodic year) $=346.6$ days (nodal year) +7.75 days
3- 365.25 days $($ Earth orbital period) $=354.39$ days (synodic year) +10.86 days
$4-687$ days $($ Mars orbital period $)=63.7$ degree Sun declination x 10.78

## II- Discussion

Before to start we should remember one main rule.... That
1 degree $=1$ day $=1 \mathrm{mkm}$
This rule is used frequently in the solar group and we can't move without it...

## Equation No. 1

1 - 346.6 days (Nodal year) $=327.6$ days (lunar sidereal year) +19
Lunar sidereal year $=327.6$ days $=27.3$ days $\times 12$ months
In fact,
The Cycle 27.3 days is the solar group basic cycle,
This conclusion I got from its specific data, but let's accept it now as a supposition We know that the moon orbit regresses yearly 19 degrees (remember 1 degree= 1 day) So ...The Nodal year 346.6 days depends on both the lunar sidereal year and its regression yearly...
I try to show that, the value 346.6 days isn't found just by chance but found based on other year ( the lunar sidereal year 327.6 days)
But why the lunar Sidereal year 27.3 days is the solar group main cycle?...We should discuss this question in another paper..

## Equation No. 2

354.39 days (Synodic year) $=346.6$ days (nodal year) +7.75 days
7.75 degrees

## Where

The Sun Obliquity to ecliptic $=7.25$ degrees
The sun diameter angle $=0.5$ degrees
(sun diameter angle means, the angle between 2 light beams touch both sides of the sun diameter)
That means ..the lunar synodic is found by the sun effect on the Nodal Year...
Again I don't know the geometrical structure by which this data is created, but I can't accept this data is found by pure coincidences....the geometrical structure features are seen in every where

## Equations No. 3 \& 4

3- 365.25 days $($ Earth orbital period $)=354.39$ days $($ synodic year $)+10.86$ days
$4-687$ days $($ Mars orbital period $)=63.7$ degree Sun declination x 10.78
(10.86 almost equal 10.78 with error $=0.7 \%$ )

These two equations tell us that, The Earth orbital period ( 365.25 days) is found based on the lunar synodic year 354.39 days with help of Mars orbital period which is found relating to the sun declination 63.7 degrees...
I see difficulty to accept such claim! to provide some creditability... let's remember

- 687 days $($ Mars orbital period $)=365.25$ days $($ Earth orbital period) x 1.9 (Mars orbital inclination $=1.9$ degrees)
- 687 days $($ Mars orbital period) $=27.3$ days (lunar sidereal month) x 25.2 (Mars axial tilt $=25.2$ degrees)
If the previous data isn't strong enough, so the next one will support my claim:

If we use Kepler $3^{\text {rd }}$ Law for the solar group data, we will find the following table

$$
\mathbf{P}^{2} * 25=\mathbf{d}^{3}\left(\text { Kepler } \mathbf{3}^{\text {rd }} \text { Law }\right)
$$

- P : The Planet orbital period
- d : The Planet orbital distance
- 25.2: Mars Axial Tilt

The results are shown in the following table

| Table No.1 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
| Planet | $\mathrm{P}^{2}$ | $* 25$ | $=\mathrm{d}^{3}$ | Error |  |
| Mercury | $(88)^{2}$ | $* 25$ | $(57.9)^{3}$ | $0.2 \%$ |  |
| Venus | $(224.7)^{2}$ | $* 25$ | $(108.2)^{3}$ | $0.3 \%$ |  |
| Earth | $(366)^{2}$ | $* 25$ | $(149.6)^{3}$ | 0 |  |
| Mars | $(687)^{2}$ | $* 25$ | $(227.9)^{3}$ | $0.3 \%$ |  |
| Jupiter | $(4331)^{2}$ | $* 25$ | $(778.6)^{3}$ | $1.4 \%$ |  |
| Saturn | $(10474)^{2}$ | $* 25$ | $(1433.5)^{3}$ | $1 \%$ |  |
| Uranus | $(30589)^{2}$ | $* 25$ | $(2872.5)^{3}$ | $1.3 \%$ |  |
| Neptune | $(59800)^{2}$ | $* 25$ | $(4495.1)^{3}$ | $1.5 \%$ |  |
| Pluto | $(90588)^{2}$ | $* 25$ | $(5870)^{3}$ | $1.4 \%$ |  |

## Discussion:

The previous table I used many time in my papers, I have no explanation why Mars Axial Tilt is the constant in Kepler $3^{\text {rd }}$ Law..
Some people told me I use wrong units to reach this result! I use million km for distance and day for periods.. why these are wrong units?!

## For Mars full discussion please read

Solar Planets Order disproves the Gravity Theory http://vixra.org/abs/1801.0114
Let's see one more example before our discussion

## 3-2 Light Motion

## I- Data

5- Light ( $c=0.3 \mathrm{mkm} / \mathrm{sec}$ ) travels from Jupiter to Uranus (2088 mkm) during 6939.75 seconds

6- Light ( $\mathrm{c}=0.3 \mathrm{mkm} / \mathrm{sec}$ ) travels from Jupiter to Earth ( 627 mkm ) during 2088 seconds
7- Light ( $\mathrm{v}=1.16 \mathrm{mkm} / \mathrm{sec}-$ light supposed high velocity) travels from Jupiter to Earth ( 627 mkm ) 540 seconds
8- Mars Jupiter Distance $=550.7 \mathrm{mkm}$ where the value $540 \mathrm{mkm}=98 \%$ of it
9- If Mars Jupiter $=540 \mathrm{mkm}$ and Jupiter orbital distance isn't changed so Mars orbital distance should be 237 mkm where 237 seconds x c velocity $=17.6 \mathrm{mkm}$ (solar planets velocities total daily)

## II- Discussion

## Equations No. 5 and 6

We have studied these 2 equations in my previous paper...
Here I try to explain that there's a relationship between Earth, Jupiter and Uranus in fact, the relationship contains 4 planets Earth, Jupiter, Uranus and Pluto... these 4 planets create this relationship on which depends the sun creation...

That's why the value 2088 is repeated 2 times one in time units and the second in distance units
Not clear for me how that's happened...
But the sun creation is the solar planets motions goal..
I mean the sun creation is the final task for the whole solar group... so the relationship between 4 planets effect immediately in this process...but not very clear yet..

## Equations No.7, 8 and 9

We knew many data

- There's a rate $=99 \%$ in the solar group and if this rate is used for 2 times we'll reach to $98 \%$...
- Jupiter Uranus Distance 627 mkm is very specific distance as the Equation tells us, but also we know that Earth orbital circumference $940 \mathrm{mkm}=627 \mathrm{mkm}+$ 778.6 mkm (Jupiter orbital distance)...

I need to show that there's a geometrical structure behind all this data
It's impossible to use the same values frequently one in time units and the other id distance units without explanation!

## 3-3 The Sun Data

## I- Data

10-7 degrees +1.25 degrees -1 degrees $=7.25$ degrees Sun Obliquity to ecliptic
$11-63.7$ degrees sun Declination $\quad=7^{2} \times 1.3$ (Jupiter orbital inclination)

## II- Discussion

I try to show how the sun got her Data!
Equation No. 10
10-7 degrees +1.25 degrees -1 degrees $=7.25$ degrees Sun Obliquity to ecliptic Where
7 degrees = Mercury orbital inclination
1.25 degrees $=(1 /$ Uranus orbital inclination $)$

1 degree $=$ The Moon orbital diameter $=1 \mathrm{mkm}$ but Mercury orbital circumference tells us that $1 \mathrm{mkm}=1$ degree
What does that mean?
Based on Mercury orbital inclination cooperation with Uranus orbital inclination and with help of the Moon orbit, the sun got her Obliquity to ecliptic
i.e.

The sun Data is NOT independent from the solar planets
(the Previous Equation show Uranus effect on the sun Creation)

## Equation No. 11

$11-63.7$ degrees sun Declination $\quad=7^{2} \times 1.3$ (Jupiter orbital inclination)
Where
7 degrees = Mercury orbital inclination
1.3 degrees $=($ Jupiter orbital inclination)

The previous equation shows Jupiter effect on the sun creation
We can see easily that, the sun creation depends on Mercury...
Let's summarize the whole idea:
The sun creation depends basically on Mercury (and Pluto), with help from Uranus and Jupiter, where the sun job is dedicated for the Earth, so the sun is created to be suitable for the Earth!
The Moon is a player came from the sun herself...
The moon is connected with the sun herself to guide the whole solar group to do perform their motions which are necessary to create the sun..

This pure imaginary idea may through some light on our old puzzle:
A. Earth Moon Distance at Perigee point $=363000 \mathrm{~km}=$ Solar Outer Planets Diameters Total (error 1\%)
B. Earth Moon Distance at Apogee point $=406000 \mathrm{~km}=$ Solar Planets Diameters Total
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C. The Distance between Perigee and Apogee $=40000 \mathrm{~km}=$ Inner Solar Planets Diameters Total = Earth Circumference.
D. Earth daily motion $=$ The moon orbit circumference at apogee radius $(r=406000 \mathrm{~km})$
E. Saturn Circumference $=$ Earth Moon Distance at total solar eclipse radius (r=377000km)
F. Note Please/ Solar Planets Diameters Total= 2 Jupiter diameters + 1 Saturn diameter (i.e. Jupiter diameter $=8$ solar planets diameters total)

## Author Other Papers

The Solar Group Main Equation (Part 2)
http://vixra.org/abs/1809.0468
The Solar Group Main Equation
http://vixra.org/abs/1809.0186
The Solar Group Main Energy
http://vixra.org/abs/1809.0152
Jupiter Uranus Distance (Metonic Cycle Reason) (revised)
http://vixra.org/abs/1809.0043
"Metonic Cycle proves,, Solar Planets Motions depend on Their Cooperation,, http://vixra.org/abs/1808.0566

Mercury Day $=3$ Mercury rotation periods $=2$ Mercury orbital periods, Why? http://vixra.org/abs/1808.0588

Mercury Jupiter Distance (revised)
http://vixra.org/abs/1808.0495
The Solar Group is One Machine (Proves)
http://vixra.org/abs/1808.0081
Solar Planet Gravity Equation
http://vixra.org/abs/1808.0012
The Moon Orbit Geometrical Structure (revised)
http://vixra.org/abs/1807.0449

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