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## **Original Research**

# SIGNS IN THE HORIZONS: EDITORIAL FORWARD TO THE THEME OF THE MARVELS OF SCIENCE IN THE NOBLE QURAN

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#### **Abstract**

A number of astronomical and cosmological facts shown to mankind are included in the Holy Quran as evidence of its truth.

"We shall show them Our signs in the horizons and in themselves, till it is clear to them that it is the truth. Suffices it not as to thy Lord, that He is witness over everything?" [41:53 sūrat fuṣṣilat] (Explained in Detail) (1) This article is a partial survey of some astronomical, geological and cosmological facts: (1) Sun, moon, solar eclipses, earth, solar terrestrial effects. (2) Solar system, planets, comets, meteors and meteorites. (3) Stars, quasars, white dwarfs etc. (4) Creation and destruction of the cosmos. (5) In addition some scientific phenomena related to the prophets Ibrahim, Yusuf, Moses and Mohammad peace is upon them all are given. Numerical scientific marvels in the Holy Quran are pointed out in their proper places.

The scope of this article is to spot some light on a wide range of scientific information in the Noble Quran with special emphasis on astronomical knowledge. This is an editorial introduction to the theme of the marvels of science in the Noble Quran.

## **Keywords**

Holy Quran; Science; Astronomy; Cosmology; Cosmogony; Quasars; White Dwarfs; Sun; Solar Eclipses; Planets; Comets; Creation; Destruction of Cosmos; Dark Matter; Dark Energy. The Prophets; Abraham; Yusuf; Moses; Mohammad \*\*.

## 1. SUN, MOON, SOLAR ECLIPSES, EARTH AND SOLAR TERRESTRIAL EFFECTS

The diameter of the sun subtend an angel in the sky about  $\frac{1}{2}$ °, precisely it is 32 arc minute averages (fig. 1) which is the number of repetition of the word sun in the Quran. On the other hand, the frequency of the word moon in the Quran is 27 which is equivalent to the sidereal length of the lunar month. The frequency of days (the day 349 + a day 16) in the Quran is 365 i.e. equal to one solar year.

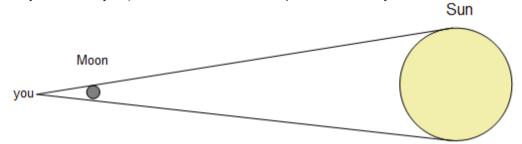


Fig. 1 The sun and the moon subtend almost exactly the same angle in the sky, 32 arc minutes (2). This makes their apparent diameters equal. Drawing not to scale.

In addition, 300 solar years ~ 309 lunar years.

"They stayed in their cave three hundred years, and exceeded by nine"18:25. (sūrat l-kahf, The Cave).

#### 1.1. THE SOLAR CORONA

The Holy Quran distinguishes between solar and lunar lights and describes the sun as a lamp.

"See ye not how Allah hath created seven heavens one upon another, (15) and hath made the moon a light therein, and made the sun a lamp?" 71:15, 16 (sūrat nūḥ).

Talking about the solar corona, the Quran says

is the temperature of fire and sun far away from it.(3) : التوهج Al tawahog

Wahagan وهاجا : indicates the variability of wahag. We can thus properly translate this verse as follows:

"And We made the temperature far away from the lamp (the sun) variable" 78:18.

In astronomical context, 2600 km above the visible surface of the sun, the photosphere, which is below 6000°K, lies the solar corona (and extends millions of kilometers in space) with a variable mysterious temperature of one to several millions of degrees depending on the phase of solar cycle and the productivity of solar flares. The hottest regions in the solar corona are 8,000,000–20,000,000 K. (4). Figure 2 shows increase of X-ray coronal flux at maximum of solar cycles and depletion at solar minimum. The variability of X-ray flux reflects the variability of the temperature of the solar corona (wahagan وماحية).

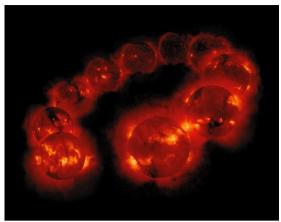
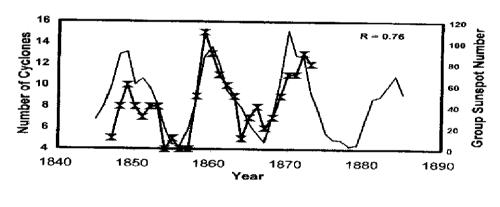


Fig 2 Solar cycle coronal temperature variation as seen in soft X-ray images. The soft X-ray telescope SXT aboard Yokkoh satellite:

Furthermore, solar terrestrial relation is pointed out here as the link between the sun and cyclones as indicated below.

"And We made the temperature far away from the lamp (the sun) variable (13) And have sent down from cyclones abundant water (14) Thereby to produce with it grains and plants (15)" 78:13-15 (sūrat (The Great News).



- Group Sunspot Nos. Fig 3 The correspondence between the number of Indian cyclones and group sunspot number (5).

-▼ Indian Cyclones

## The 22 years Hale magnetic cycle

The two solar magnetic poles reverse their polarities every 11 years, thus every pole returns to its original polarity every 22 years.

## The 51 years solar periodicity

On carrying out solar periodicity analyses of the sun spot number, the 51 year periodicity stands out. The 11, 22 and 51 or 52 years solar periodicities are very strong in rain, cyclones, river Nile and England temperature series. Such periodicities are evident in fig 4 (5). Cross correlation between the Equatorial and Ethiopian contributions of the Nile during the period 622-1468 AD, indicates that the two contributors were inversely correlated for 80 years, then they change for positive correlation for 51 years (6).

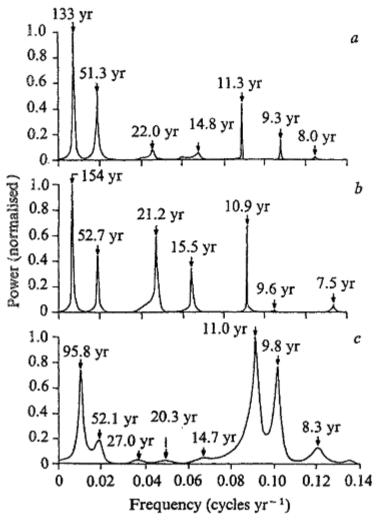


Fig 4 The power spectra for a number of Atlantic tropical cyclones, the length of the tropical cyclone season, and the sunspot number (5) and their reference). Note the 11, 22 and 51 periodicities evident in the three power spectra indicating the influence of the sun in initiating cyclones.

In 1872 Meldrum found a correlation between Indian cyclones and the sunspot number (cited in 5). More recently, streams of solar wind emanating from solar coronal holes are proved to initiate depressions over the western coast of the Red Sea facing Makkah Al-Mukaramah and Jeddah and cause rapid formation of Cumulonimbus clouds and thus extensive flash floods(7).

In the case of the hitting of such solar wind streams to the troposphere over vast open seas, then they initiate depressions that develop into cyclones (8).

Frequent cyclones are expected during the present era of weak solar cycles (1996-2032) with special emphasis on Oman (8).

﴿ وَفِي الْسَّمَاءِ رِزْقُكُمْ وَمَا تُوعَدُونَ (٢٢)﴾ سورة الذاريات "And in the heaven is your sustenance and what you are threatened with." 51:22 (sūrat l-dhāriyāt)

Surely both the numbers 51 and 22 are solar periodicities indicating that both of our sustenenance (e.g. rain, fishery, plantation etc.) and what threaten us (e.g. destructive hurricates and earthquakes etc.) are solar modulated (5, 9,10 and 11).

In addition the very name of Surat 51 I-dhāriyāt which is inspiring being derived from atoms, meaning the wind that carries atoms; in other words solar wind and cosmic rays.

"And by the Lord of the heavens and the earth! it is most surely the truth, just as you do speak. "51:23 (sūrat I-dhāriyāt, the wind which carries atoms)

﴿ وَيَا قَوْمِ اسْتَغْفِرُوا رَبَّكُمْ ثُمَّ تُوبُوا إِلَيْهِ يُرْسِلِ السَّمَاءَ عَلَيْكُمْ مِدْرَارًا وَيَزدْكُمْ قُوَّةً إِلَى قُوَّتِكُمْ وَلَا تَتَوَلَّوْا مُجْرِمِينَ (٢٥)﴾ سورة هود "And my people seek forgiveness from your Lord, then repent to Him: He will send the sky to you abundantly, and He will increase might to your might. So do not turn away as criminals" [11:52 (sūrat hūd (Hud)].

Another confirmation of the solar periodicities 11 and 52 which are geo-effective is in Surat Hûd. .Both of the Prophets Noah and Hûd said the same sentence.

We point out that the number of verse of Surat Noah is 11 indicating solar connection.

abundance (11)" [Surat Nuh (71)].

## 1.2. CORONAL MASS EJECTIONS

These Aiat are talking about the space age and about coronal mass ejections or CMEs. They are ejected pieces of the solar and or stellar coronas with temperatures in excess of million degrees and very high velocities, they are real projectiles of fire that are frequently ejected in all directions and can hit space probes and destroy them. Sometimes, those CMEs hit the earth and cause severe disturbances that lead to charge accumulation on satellites surfaces and burn them. Charged particles can also destroy instruments. The disturbances may drag satellites and cause them to fall down. The earth is however protected by the magnetosphere but direct hits to space probes can be a real disaster.

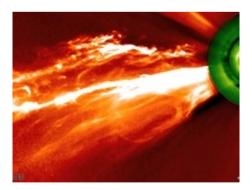
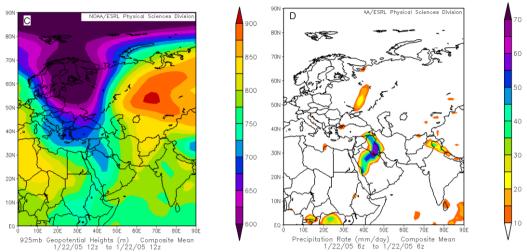


Fig 5. Coronal mass ejection.

﴿ فَقُلْتُ اسْتَغْفِرُوا رَبَّكُمْ إِنَّهُ كَانَ غَفَّارًا (١٠) يُرْسِلِ السَّمَاءَ عَلَيْكُمْ مِدْرَارًا (١١) ﴾ سورة نوح

"Then I said, Ask forgiveness of your Lord, surely He is all Forgiving (10) He will send the sky upon you in abundance (11)" [Surat Nuh (71)].

## Solar stimulations of terrestrial rain and torrent



**Fig. 6.** 925 mb Geopotential height for the Hajj event of 22 January 2005 flash floods. A CME hit the polar cap atmosphere on 20 Jan. Left fig.: 22 Jan map clearly indicates the extension of the low pressure region southward to Saudi Arabia passing by the Mediterranean Sea where the clouds were loaded with water. Right fig: Precipitation rate on 22 Jan indicating excessive flash floods passing over Makkah Al-Mukaramah, Al-Madinah Al-Munawarah and Jeddah (7).

The CME event of 20 January 2005 which was accompanied by a proton stream accelerated to almost the velocity of light. This event caused serious floods in three destinations, Makkah Al-Mukaramah, Al-Madinah Al-Munawarah and Jeddah. Flash floods in Makkah Al-Mukaramah happened around 14:30 on 22 January during Hajj period (7).

The sequence of events that led to these severe flash floods is summarized as follows (consult fig 6):

- 1- A CME hit the Northern Polar region on 20 January and lowered the pressure in the hitting spot to
- 2- The low pressure region extended to lower latitudes passing by the Mediterranean Sea and thus heavy clouds were formed rapidly.
- 3- The pressure extension reached Saudi Arabia (Fig. 6-upper).
- 4- Flash floods occurred in the three cities starting with Al-Madinah Al Munawarah indicating that the clouds were coming from the Northern direction. (Fig6- bottom). Note the similarity between the low pressure zone and rain zone (Fig. 6).

## 1.3. THE MOON AND SOLAR ECLIPSES

The moon is tidally locked to the earth, i.e. it rotates around the earth in 27 days while revolving around itself in 27 days also with the result that it gives only one face towards the earth and we see not its back. But because its orbit around the earth is elliptical, we can see 7.8 degrees from its back, besides an extra degree as the observer on the earth is spinning with it. In addition we see 180 degrees (half of it) which faces the earth. Thus, we see from the earth  $\sim 189^\circ$  of the lunar surface which is the number of the following verse giving the answer about the cause of lunar crescents and combining this answer with another question about entering houses from the back prior Islam, if one returned home when on pilgrimage. Thus giving a full accurate answer of lunar phases and locking.

"They ask thee concerning the crescents. Say: They are signs to mark fixed periods of time in (the affairs of) men, and for Pilgrimage. It is no virtue if ye enter your houses from the back: It is virtue if ye fear God. Enter houses through the proper doors: And fear God: That ye may prosper (189)" [Surat 2 Al Bakara].

In the early times, during solar eclipses when it became dark, they thought that the night overtook the day, but the Quran denies this declaring that each of them has its own orbit. If we take the earth-moon distance as unity, then the earth-sun distance (astronomical unit) is 400 times. Similarly, the diameter of the sun is 400 times larger than that of the moon. Those conditions are necessary to make the apparent disk of the moon equal to that of the sun in order for the moon to fully cover the sun during a solar eclipse (see fig 1). That information is given in verse forty of surat Yassen. According to the traditions of the prophet Mohamed. peace be upon him, reading of Surat Yassen is 10 times equivalent to reading the whole Quran. Thus multiplying the verse number by 10 = 400 which is the ratio of the sun-earth distance to the moon-earth distance;

"It is not for the sun to overtake the moon, nor can the night outstrip the day: each of them is swimming in its own orbit (40)" [Surat Yaseen].

Eventually, the Sun also appears about 400,000 times brighter than the full moon. "Such is the Decree of Him the All-Mighty, the All-Knower".

Such geometry of sun, moon, and earth system makes equal the apparent diameters of the sun and the moon as seen from the earth. This indeed allows the disk of the moon to fully cover the disk of the sun during total solar eclipses.

﴿ الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ (٥)﴾ سورة الرحمن - According to Mujahid (حسبان ) the husban of millstone which is what surrounds the round edge of the millstone (13). In other words it is the ring which encircles its round stone (14). Thus the correct translation of verse 5 of sūrat I-rahmān is

"The Sun and the moon are within a ring" [55:5 sūrat I-raḥmān (The Most Gracious)].

This Aiat is talking about total solar eclipse where at totality the sun and the moon are seen within the ring of fire, the corona.



Fig. 7. The sun and the moon are within the ring of fire, the corona during a total solar eclipse. The black disk is the moon which is eclipsing the sun.

#### 1.4. THE 1ST OF APRIL 2470 TOTAL SOLAR ECLIPSE OBSERVED BY THE PROPHET IBRAHEEM

The prophet Ibraheem (Abraham) witnessed a total solar eclipse on the first of April 2470 BC when Babel was on the borfer of the totality zone. This condition allows no corona to be seen during totality. As the moon's shadow covered him, he saw only one planet; it was Venus according to Ibn Abas and to astronomical tables. The description of the stages of solar eclipse is given in the Quran and illustrated in figs 8 while (9) shows eclipse passage map.

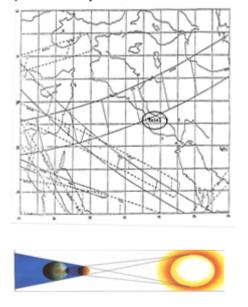
﴿ وَإِذْ قَالَ إِبْرَاهِيمُ لِأَبِيهِ أَزَرَ أَتَتَّخِذُ أَصْنَامًا آلِهَةً إِنِّي أَرَاكَ وَقَوْمَكَ فِي ضَلَالٍ مُبِينِ (٧٤) وَكَذَلِكَ نُرِي إِبْرَاهِيمَ مَلَكُوتَ السَّمَاوَاتِ وَالْأَرْضِ وَلِيَكُونَ مِنَ الْمُوقِنِينَ (٧٥) فَلَمَّا جَنَّ عَلَيْهِ اللَّيْلُ رَأَى كَوْكَبًا قَالَ هَذَا رَبِّي فَلَمَّا أَفَلَ قَالَ لَا أُخِيبُ الْأَفِلِينَ (٧٥) فَلَمَّا رَأَى الشَّمْسَ بَازِغَةً قَالَ هَذَا رَبِّي الْقَوْمِ الضَّالِينَ (٧٧) فَلَمَّا رَأَى الشَّمْسَ بَازِغَةً قَالَ هَذَا رَبِّي الْقَوْمِ الضَّالِينَ (٧٧) فَلَمَّا رَبِّي فَلَمَّا رَبِّي مُنَا تُشْرِكُونَ (٧٨) إِنِّي وَجَهْتُ وَجْهِي لِلَّذِي فَطَرَ السَّمَاوَاتِ وَالْأَرْضَ حَنِيفًا وَمَا أَنَا مِنَ الْمُشْرِكِينَ (٧٩) وَحَاجَهُ قَوْمُهُ قَالَ أَنْحَاجُونِي فِي اللَّهِ وَقَدْ هَذَانِ وَلَا أَخَافُ مَا تُشْرِكُونَ بِهِ إِلّا أَنْ يَشَاءَ رَبِّي شَيْئًا وَسِعَ رَبِّي كُلَّ شَيْءٍ اللهُ مُنْ يَكِينَ (٧٩) وَحَاجَهُ قَوْمُهُ قَالَ أَنْحَاجُونِي فِي اللَّهِ وَقَدْ هَذَانِ وَلَا أَخَافُ مَا تُشْرِكُونَ بِهِ إِلّا أَنْ يَشَاءَ رَبِّي شَيْئًا وَسِعَ رَبِّي كُلَّ شَيْءً

عِلْمًا أَفَلَا تَتَذَكَّرُونَ (٨٠) وَكَيْفَ أَخَافُ مَا أَشْرَكُتُمْ وَلَا تَخَافُونَ أَنَّكُمْ أَشْرَكُتُمْ بِاللَّهِ مَا لَمْ يُنَزِّلْ بِهِ عَلَيْكُمْ سُلْطَانًا فَأَيُّ الْفَرِيقَيْنِ أَحَقُ بِالْأَمْنِ إِنْ كُنْتُمْ تَعْلَمُونَ (٨١) الَّذِينَ آمَنُوا وَلَمْ يَلْبِسُوا إِيمَانَهُمْ بِظُلْمٍ أُولَئِكَ لَهُمُ الْأَمْنُ وَهُمْ مُهْتَدُونَ (٨٢) وَتِلْكَ حُجَّتُنَا آتَيْنَاهَا إِبْرَاهِيمَ عَلَى قُومِهِ نَرْفَعُ دَرَجَاتٍ مَنْ نَشَاءُ إِنَّ رَبَّكَ حَكِيمٌ عَلِيمٌ (٨٣) ﴾ سورة الانعام

"And it is such that We showed Abraham the hidden kingdom of heavens and earth, so that he will be of those who have certainty (75). When the night covered him, he saw a planet, and he said: "This is my Lord." But when it disappeared he said: "I like not those that disappear (76) So when he saw the moon showing up, he said: "This is my Lord." But when it disappeared he said: "Unless my Lord guides me, I shall surely be among the people gone astray." (77) So when he saw the sun showing up, he said: "This is my Lord, this is bigger." But when it disappeared he said: "O my people, surely I am quit of that you associate. (78) I have turned my face toward Him Who originated the heavens and the earth, and I am not of the polytheists (79)" [Surat 6 AlAnaam].



**Fig. 8.** The stages of total eclipse observed from the border of totality zone as described by the Holy Quran; upper left, the shadow of the moon covered the young Ibraheem, he saw Venus, then he saw the moon just appearing then he saw the crescent sun just emerging. The eclipse lasted only one minute.



**Fig.9. Upper:** The Solar Eclipse of the 1<sup>st</sup> of April 2470 BC seen by the prophet Ibraheem from Babel on the edge of the totality zone. Note the large width of totality zone and that it passed over Northern Egypt. **Bottom:** The cosmic prayer of the sun, moon and earth during total solar eclipse. The three bodies are lined up and lunar shadow is prostrating on the earth.

The prophet Mohammad, peace be upon him also witnessed a solar eclipse, in El Madinah al Munawarah on the tenth year of Higra, 632 AD. This eclipse coincided with the death of his only son Ibraheem. After performing the eclipse prayer, he declared," the Sun and the moon are two marvels of God, they do not eclipse for the death of any one or his life, if you see this, do pray". Prayers in Islamic style; lineup, stand, kneel and prostrate to Allah. The shadows also prostrate to God. What is outstanding is that the eclipse prayer is in exact harmony with the solar – lunar 4 contacts.

"And unto Allah prostrate whosoever is in the heavens and the earth, willingly or unwillingly, as do their shadows in the morning and the evening hours" [13:15 sūrat l-ra d (The Thunder)].

During a solar eclipse, the sun, moon and earth line up and the moon's shadow prostrate on the earth to God. While on lunar eclipse, the earth's shadow falls on the moon in prostration. Solar and lunar eclipses are the cosmic prayer of the sun, earth and moon. Muslims join up this collective cosmic prayer on performing the eclipse prayer.

Before the solar eclipse starts, the lunar shadow is short but God prolongs it to reach the earth (fig 8 upper left), and the shadow moves across the totality path from west to east (fig 9), it is not stationary. Following totality, the sun appears as a crescent (fig 8 right) and it becomes light indicating that the darkness that prevailed during the solar eclipse is because of the moon blocking the solar disk. The shadow mentioned here is the lunar shadow as seen in (fig 8 upper left). Thereafter, Allah seizes the lunar shadow and withdraws it upwards towards Him that it becomes short to reach the ground and thus the solar eclipse is terminated.

"Have you not seen your Lord, how He prolongs the shadow? And if He had pleased He would have made it stationary; then We have made the sun an indication of it (46) thereafter We seize it to Ourselves, drawing it gently(47)" [sūrat l-fur'qān 25 (The Criterion)].

Surely the above two verses of sūrat l-fur'qān are not mentioning daily shadows as the shadows start long at early morning but shorten till mid-day then prolong again till sun set which is not matching the verse. In addition, daily shadows are projected into the ground however in the verse it is stated "We seize it to Ourselves" meaning upwards.

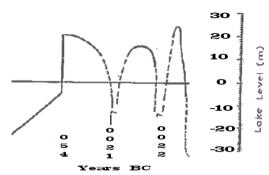
## 1.5. DATING THE PROPHETS YÛSUF (JOSEPH) AND MOSES

"For seven years shall ye diligently sow, but that which ye reap, leave it in the ear, all save a little which ye eat (47). Then shall come after that seven hard years, which shall eat all that you shall have laid by in advance for them except a little which you may fortified (48) Then will come after that a year in which the people will be given rain and in which they will press (49)" [12: 47-49 sūrat yūsuf (Joseph)].

"And indeed We seized the people of the Pharaoh with years of drought and deficiency in fruits that perhaps they would be reminded" [7: 130 (sūrat l-a rāf (The Heights)].

Nile floods records are preserved in the geological time series of Lake Qarun (fig. 10). There is a high land between Nile and Lake Qarun. When the flood was high, Nile water over ridded the hill and dropped into the Lake raising its level high. Otherwise, at low Nile floods, the Lake was kept isolated from the Nile and its level dropped down. The seven drought years of the prophet Yûsuf started in 2200 BC, while those of the prophet Moses ended by 1200 BC (15,16,17,18). The 2200 famine years of the prophet Yûsuf are in harmo-

ny with solar eclipse dating of young Ibraheem as of the 1st of April 2470 BC. The prophet Ibraheem is the grandfather of Jacob, Yûsuf 's father taking into account that they lived a lot of years.



**Fig.10.** Time series of Lake Qarun level relative to sea level.

Note the seven famine years of the prophet Yusuf peace be upon him starting in 2200 BC. Note also the drought years of the prophet Moses peace be upon him ended in 1200 BC. Note that no other drought years occurred between 1200-2200 BC which is an outstanding remark. Note also that the floods were moderate.

## 2. SOLAR SYSTEM, PLANETS, COMETS, METEORS AND METEORITES: THE LOW-EST HEAVEN.

"Surely, your God is One (5) Lord of the heavens and of the earth and all between them, and Lord of every point at the risings (6) Lo! We have adorned the lowest heaven with ornament, the planets (7) And a safeguard against every rebellious Shaitan (8) They cannot listen to the Highest assembly; and they are bombarded from every side (9) Being driven off, and for them is a perpetual chastisement (10) Any of them who snatches something away, he is pursued by a piercing meteor flame (11)" [(Surat 37) sūrat l-ṣāfāt (Those Ranges in Ranks)].

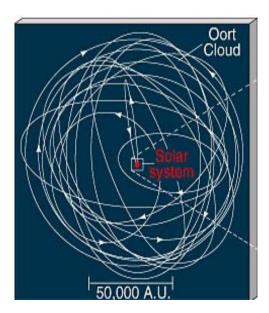


Fig.11. The lowest heaven.

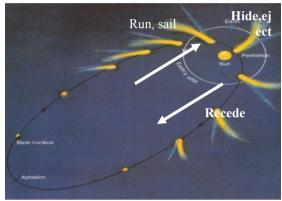
Surely, the solar system is adorned with ornaments, the planets. The whole solar system is embedded into a covering spherical protective envelope of several trillion frozen icy comets that form the Oort cloud. The Oort cloud lies at One Light Year from the earth.

"Such is the Decree of Him the All-Mighty, the All-Knower".

Comets orbits are in every direction. It seems that this is the safeguard from the devils. They cannot thus listen to the highest order otherwise a piercing fire meteor will follow the one who dares.

Al Khonus = The Comets ﴿ فَلَا أُقْسِمُ بِالْخُنَّسِ (١٥) الْجَوَارِ الْكُنَّسِ (١٦) وَاللَّيْلِ إِذَا عَسْعَسَ (١٧) وَالصَّبْحِ إِذَا تَنَفَّسَ (١٨) إِنَّهُ لَقَوْلُ رَسُولٍ كَرِيمِ (١٩) ذِي قُوَّةٍ عِنْدَ ذِي الْعَرْشِ مَكِينِ (٢٠) مُطَاعِ ثَمَّ أَمِينٍ (٢١) وَمَا صَاحِبُكُمْ بِمَجْنُونٍ (٢٢) وَلَقَدْ رَآهُ بِالْأَفُقِ الْمُبِينِ (٢٣) وَمَا هُوَ عَلَى الْغَيْبِ بِضَنِينٍ (٢٤) وَمَا هُوَ بِقَوْلِ شَيْطَانٍ رَجِيمٍ (٢٠)﴾ سورة التكوير





**Fig.12.** Left: usually the comet is seen on the horizon, first after sun set as the night comes, then before sun rise as the night departs, after turning behind the sun. **Right**: The comet recedes like a horse receding with tail ahead, the comet then turns towards the sun and sails develop like a sailing boat, then the comet reaches perihelion, hide behind the sun and eject debris.

In order to understand and translate those verses, it is essential to know the exact Arabic (19) and thus English meanings of some unfamiliar words namely:

الخنس Alkhonas : فرس خَنُوس يرجع الْقَهْقَرى تراجع. Alkhonas الخنس Recede, horses move backwards, retrograde, retraction, become invisible, and hide.

Algawari: Sailing vessels الجوار

"And His are the ships with raised masts sail in the sea like mountains" 55:24

Alkonas: are Antelopes enter between trees, sweep the sand to reach the dust, rest and hide.

"Nay! I swear by those that retrograde (15) sail khonas (sweep, rest and hide) (16) and by the night as it comes and departs (17) And by the morning when it breathes (18) This is the utterance of an honorable messenger (19)" [Chapter (81) sūrat I-takwīr/].

The orbit of a comet is fully described in the Holy Quran dynamically and physically by three Arabic words; AlKhonas, Algawari and khonas as evident from fig 12 right

1- AlKhonas: Starting from the point of perihelion (closest point to the sun) the comet recedes backward with its tail in the opposite side of the sun in analogy to a horse receding. As it recedes away from the sun, its tails shorten then disappear and the comet becomes just a piece of rock enveloped

- with dirty ice and become invisible. This function happens in the receding branch of the orbit as the comet reaches its aphelion point in its long elliptical orbit (furthers point in its orbit).
- 2- Algawari: Passing aphelion, the comet changes its direction of motion and proceeds towards the sun. As it gets into the inner solar system, it becomes visible again when the sun's heat evaporates its ice and the solar wind pushes the gas and dust away into long sails, this word describes the function in the approaching branch of the orbit. The comet reaches perihelion earlier or later than estimated by Newton's laws.
- 3- Alkhonas: The comet then appears after sunset as the night comes. Then the comet reaches its point of perihelion, becomes invisible and hides behind the sun and throws sand into space. At this point, a comet completes one revolution in its orbit (fig 9 right). It is this sand which makes meteors showers as the orbit of comet intersects the earth's orbit. Then the comet recedes again and becomes visible at dawn before sunrise as the night departs and the heat and solar Ultraviolet radiation expands the earth's air facing the sun in a breathing mode. Indeed this is the utterance of a messenger of Allah.

It was the comets that brought water to the earth in its early stage; the number of aiat( verse) is the atomic weight of water.

﴿ وَ أَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِقَدَرٍ فَأَسْكَنَّاهُ فِي الْأَرْضِ وَإِنَّا عَلَى ذَهَابٍ بِهِ لَقَادِرُونَ (١٨)﴾ سورة المؤمنون.
"And We sent down out of heaven water in measure and lodged it in the earth; and We are able to take it away" [23:18 sūrat I-mu'minūn (The Believers)].

From time to time, cosmic bodies enter the earth's atmosphere. Provided their sizes are small enough they would be completely burnt out, large sizes cosmic bodies would struck the surface of the Earth leaving impact craters. A medium size cosmic body would go through an air explosion inducing a ring (husban fig. 12) and a shock wave. This shock wave would raise the temperature of the surface instantaneously in a vast area of the Earth turning the sandy face of the ground into slippery glasses. If there is a well or a spring in the area then the shock wave will force the water deep into the ground. The third effect of the shock wave is to knock down fruit and trees in the area.

This proposed mechanism is capable of explaining the existence of large areas of glassy material with no apparent trace of impact craters like in the Libyan Desert glass area (20).

Reflect on the following verses of the Quran:

﴿ فَعَسَى رَبِّى أَنْ يُؤْتِيَنِ خَيْرًا مِنْ جَنَّتِكَ وَيُرْسِلَ عَلَيْهَا حُسْبَانًا مِنَ السَّمَاءِ فَتُصْبِحَ صَعِيدًا زَلَقًا (٤٠) أَوْ يُصْبِحَ مَاؤُهَا غَوْرًا فَلَنْ تَسْنَطِيعَ لَهُ طَلَّبًا (٤١) وَأُحِيطَ بِثَمَرِهِ فَأَصْبَحَ يُقَلِّبُ كَقَيْهِ عَلَى مَا أَنْفَقَ فِيهَا وَهِيَ خَاوِيَةٌ عَلَى عُرُوشِهَا وَيَقُولُ يَا لَيْنَتِي لَمْ أُشْرِكُ بِرَبِّي أَمَّدًا (٤٢) وَلَمْ تَكُنْ لَهُ فِنَةٌ يَنْصُرُونَهُ مِنْ دُونِ اللهِ وَمَا كَانَ مُنْتَصِرًا (٤٣)﴾ سورة الكهف.





Fig.12. Mid-air explosion of a cosmic body producing a ring and a shock wave resulting in knocking down trees.

We recall here the meaning of husban. According to Mujahid (حسبان الرحى husban) is related to (حسبان الرحى) the husban of millstone which is what surrounds the round edge of the millstone (13). In other words it is the ring which encircles its round stone (14). So Husban is equivalent to ring. The frequency of the word husban in the Noble Quran is 3.Husban was twice mentioned in relation to sun and the moon related to the ring of fire( corona) which encircles them during solar eclipse (fig 7). The third time it is mentioned in verse18:40.

"It may be that my Lord will give me something better than your garden, and will send on it Husban (ring) from the sky, thus the face of the earth will be slippery (40) or its water becomes deep-sunken, so that you will never be able to seek it (41)He was encircled by his fruit thus and in the morning he remained turning his palms over what he had spent on it, while it has fallen on its trellises, and say "Woe is me! Would that I had ascribed no partners to my Lord! (42)" [Surat Al-Kahf 18].

# 3. DARK MATTER, DARK ENERGY, STARS, QUASARS, WHITE DWARFS

## 3.1. DARK MATTER AND STARS

"Nay, I swear by the places of the stars (75) And indeed, it is an oath - if you could know tremendous (76) This is, indeed, a noble Qur'an (77) in a hidden Book (78)" [Chapter (56) sūrat I-wāqi ah (The Event)].

The word maknoon مكنون means hidden, preserved. In the Quranic prospect it has been mentioned several times, e.g.

"..... hidden pearls (24)" [Surat Al Tur].

The pearls are preserved in their shells.

The above swear is about the position of stars

The answer of the swear which must be connected with the oath is

"This is, indeed, a noble Qur'an (77) in a hidden Book (78)".

Look at fig. 13 which shows a shell of dark invisible hidden matter surrounding a cluster of galaxies (21) preserving it in analogy to the shell preserving the pearls. A ring of dark matter also surround galaxies (21).



**Fig.13.** Dark matter is invisible. Based on the effect of gravitational lensing, a ring of dark matter has been inferred in this image of a galaxy cluster (CL0024+17) and has been represented in blue (21).

Indeed, the discovery of dark matter ring and the places of stars is a great oath.

And indeed, it is an oath - if you could know tremendous (76) This is, indeed, a noble Qur'an (77) [Chapter (56) sūrat l-wāqi ah (The Event)].

O, astronomers, do reflect on these verse, how could Mohamed, the illiterate man who lived more than 1400 years know about dark matter?

Dark matter is mentioned in the Holy Quran distinctively in the following verse:

﴿ خَلَقَ السَّمَاوَاتِ بِغَيْرِ عَمَدٍ تَرَوْنَهَا وَأَلْقَى فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِكُمْ وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ وَأَنْزَلْنَا مِنَ السَّمَاءِ مَاءً فَأَنْبَتْنَا فِيهَا مِنْ كُلِّ زَوْجٍ كُرِيمٍ (١٠) هَذَا خَلْقُ اللهِ فَأَرُونِي مَاذَا خَلَقَ الَّذِينَ مِنْ ذُونِهِ بَلِ الظَّالِمُونَ فِي ضَلَالٍ مُبِينٍ (١١) ﴾ سورة لقمان He created the heavens without pillars that you see..... 31:10 sūrat luq'mān].

This indeed is the invisible dark matter used in the very creation of the heaven. Dark matter constitutes most of the matter in the cosmos. We can only see less than 5% of the cosmos.

'He created the heavens without pillars that you see and has cast into the earth anchors, lest it should convulse with you ... " [31:10 sūrat lug'mān].

The function of dark matter in the creation can be deduced from the following statement in the same verse

"and has cast into the earth anchors, lest it should convulse with you...".

As the function of mountains on the earth is to stabilize the earth so that it would not shake, dark matter stabilizes galaxy clusters and prevents them from shaking. The above mentioned function of dark matter in the cosmos is not yet discovered. This is a brief mention of dark matter in the Noble Quran, A more conclusive paper will follow with Allah's permit.

#### 3.2. DARK ENERGY

"Allah is He Who raised the heavens without any pillars that ye can see:"

This is the secondary raising that led to the accelerated expansion of the universe.

﴿ أَأَنْتُمْ أَشَدُ خَلُقًا أَمِ السَّمَاءُ بَنَاهَا (٢٧) رَفَعَ سَمْكَهَا فَسَوَّاهَا (٢٨) ﴾ سورة النازعات "Are you a more difficult creation or is the heaven? He built (27) He raised up its thickness, and leveled it (28)" [Chapter (79) sūrat I-nāziʿāt ].

The first raising was very early following the Big Bang and is known as inflation. The consequence of this first raising made the cosmos flat (leveled) (22).

"He raised up its thickness, and leveled it" 79:28

A more detailed paper will follow In Shaa Allah.

## Al-Taareg = Quasars

To my knowledge, apart from the sun, two kinds of stars are mentioned by name in the Quran, Al-Tareg and Sirius.

بسْم اللهِ الرَّحْمَنِ الرَّحِيم

"By the sky and Al-Taareg (1) Ah, what will tell thee what Al-Taareg is (2) The piercing star (3) There is not a soul but has a quardian over it (4) So let man see from what he was created (5) He was created from an (ejected) flushing water (6)" [ (Chapter (86) sūrat I-tāriq)].

This description can only fit Quasars (Quasti-stellar objects). Quasars were discovered in the 1960s. They are star like but their masses are enormous. Its hot accretion disk is around a super massive black hole. The disk ejects powerful jet that pierces the space as seen in fig (14). This explains the combination of the piercing star and the ejected gushing water from which man was created. These objects are located near the edge of the cosmos. Their jets are pointing towards the earth.

Some Quasar studies indicate that the earth is at the center of the cosmos (23 and 24).

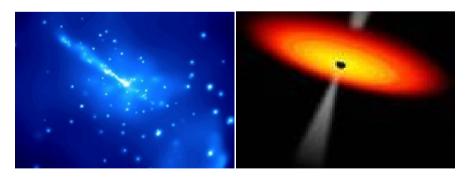


Fig.14. Quasars, actual photo and a model showing the ejected piercing column

## 3.3. SIRIUS B, THE STAR THAT COLLAPSED ON THE NIGHT OF MIHRAJ

﴿ وَالنَّجْمِ إِذَا هَوَى (١) مَا ضَلَّ صَاحِبُكُمْ وَمَا غَوَى (٢) وَمَا يَنْطِقُ عَنِ الْهَوَى (٣) إِنْ هُوَ إِلَّا وَحْيٌ يُوحَى (٤) سورة النجم Surat Al Nagn (The star) starts with the following verses:

"By the Star when it collapsed (1) Your Companion is neither astray nor being deceived (2) nor speaks he out of desire (3) This is naught but a revelation revealed (4)".

The Surat mentions Sirius

"And that He is the Lord of Sirius" 53:49

It ends with a command of prostration.

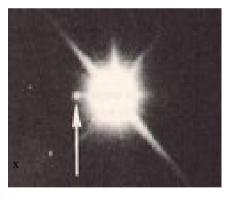
"So prostrate to Allah and worship" 53:62.

In the latter stages of developments of medium mass stars, they expand dramatically to become Red Giants., In the case of a single Red Giant star, it ejects an envelope but the core collapses to the size of a planet and becomes a white dwarf. However in the case of binary stars, mass transfer occurs, and the Red Giant envelope gets transferred to its companion.

Sirius B, which is the companion of Sirius A is the first white dwarf discovered showing gravitational red shift. When one prostrates, there is a great reduction in his size. Similarly the great reduction of the size of the star to planetary size or smaller is its prostration. This also applies to black holes and neutron stars (fig 15). The pagan Arabs as well as the Ancient Egyptians used to worship the great Red Giant Sirius. On the night of ascension Al Meraj final transfer of its envelop to the benefit of its companion Sirius A happened and its core collapsed to a white dwarf.

"And that He is the Lord of Sirius" 53:49. The Meraj happened one year before Hijra when the prophet Mohammed was 53 years old which is the number of Surat the star. The revolution of Sirius B and Sirius A around their common center of gravity over a period of about 49 years (25) which is the number of verse mentioning Sirius.

"The stars and the trees prostrate" [55:6 -sūrat l-raḥmān (The Most Gracious)].



**Fig.15.** The collapse of Sirius B from a star size to earth size as an action of prostration.

# 4. ON THE CREATION AND DESTRUCTION OF THE COSMOS

"And the heaven, We constructed it with power, and indeed, We are [its] expander (47) And the earth We spread out; how excellent is the preparer (48) And from everything We created a pair, that you may remember. (49) So flee towards God. I am a clear Warner coming to you from Him (50)" [Surat Athariat chapter 51].

We stress here two points: The cosmos is expanding and that everything is created in pairs.

## 5. THE RESTING PLACE OF THE SUN

The whole cosmos is expanding apart from our galaxy, the Milky Way with our sun and the local group of galaxies, the Virgo cluster and thousands of galaxies. They are hurtling with a velocity of ~ 600 km/s towards a great mass of about 5 X 10<sup>16</sup> the solar mass, 90% of it is in the form of dark matter in the direction of the constellation of Centaurus beyond the great attractor. In analogy to pins attracted by a magnet, the pins will come to a halt once they reach the magnet which can be called their destination or resting position. The expansion of the cosmos is clearly stated in the following verse of the Quran.

﴿ وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ (٤٧)﴾ سورة الذاريات "We constructed the heaven with power, and We are expanding it" [51:47 - Surat Athariyat].

But when it comes to the sun, the Holy Quran states:

"And the sun runneth on unto a resting-place for him. That is the measuring of the Mighty, the Wise" [36:38 -Saurat ( Yaseen)].

Talking about the end of the cosmos, the Holy Quran says:

Perhaps the act of rolling mentioned in the above verse initiated angular momentum that lead to the rotation of the cosmos, clusters of galaxies, stars, the moon around earth etc.). The later monthly revolution of the moon around the earth is mentioned by the prophet Mohamed.

Narrated Abu Bakr: The Prophet (علمالله) said. "Indeed, Time has rotated to its form the day Allah created the Heavens and the Earth. The year is of twelve months, out of which four months are sacred: Three are in succession Dhul-Qa' da, Dhul-Hijja and Muharram, and (the fourth is) Rajab of (the tribe of) Mudar which comes between Jumadi-ath-Thaniyah and Sha ban".

This saving of the prophet is also supported by the noble Quran:

"The number of the months, with God, is twelve months in the Book of Allah, the day that He created the heavens and the earth; four of them are sacred. That is the right religion. So wrong not each other during them. And fight the polytheists all together as they fight you all together; and know that Allah is with the pious ones" [9:36- sūrat l-tawbah (The Repentance)].

The saying of the Prophet significant indicates that time taken by the moon to revolve around the earth at the farewell pilgrimage is in the same form as it was at the day Allah created the heavens and the earth. It is worth to mention that the Jews at biblical times either consider the year 12 or 13 months. On the annihilation of the Cosmos, we can read:

﴿ إِنَّ اللَّهَ يُمْسِكُ السَّمَاوَاتِ وَالْأَرْضَ أَنْ تَزُولَا وَلَئِنْ زَالَتَا إِنْ أَمْسَكَهُمَا مِنْ أَحْدِ مِنْ بَعْدِهِ إِنَّهُ كَانَ حَلِيمًا غَفُورًا (٤١) ﴾ سورة فاطر "Allah is the One who holds the heavens and the earth, lest they vanish. And if they did vanish, none can hold them back but HE. Verily, HE is Forbearing, Most Forgiving" [35: 41- Surat Fatir].

From all of the above mentioned verses of the Quran, we may speculate that the cosmos can be represented as in fig. 16. It is split around its center which was the site of the Big Bang where some light from the throne was transferred into biverses; one is composed of matter while the other is composed of anti-matter. At the end day, the two biverses will be closed leading to their annihilation. In other words, it looks that the cosmos was created from light, matter and anti-matter were created instantly in equal amounts. Matter was ejected in one direction forming a universe (wing), ours, while anti matter was ejected in the other direction forming the other version of the cosmos. The biverses were kept apart. This biverse model explains why our universe lacks anti matter.

"Allah is the One who holds the heavens and the earth, lest they vanish..."

﴿ ... كَمَا بَدَأْنَا أَوَّلَ خَلْقٍ نُعِيدُهُ وَعْدًا عَلَيْنَا إِنَّا كُنَّا فَاعِلِينَ (١٠٤)﴾ سورة الأنبياء "Just as we initiated the first creation, we will return it ... [21:104 - Al Anbijaa (the Prophets)].

joined together as one cloud (22) الراتق: المُلْتَثَم من السحاب

"Do not the unbelievers see that the heavens and the earth were joined as one cloud and We tore them apart? And that We made from the water everything that lives. Will they not believe?" [21: 30 - Surat Al Anbiaa (the prophets)].



**Fig.16.** The vision of the cosmos a center and two wings, one formed of matter and the other of anti matter. The photo of the butterfly nebula is used for illustration.

## 6. CONCLUSION

The era of space age and high technology has brought mankind to the frontiers of the cosmos, but every knowledge we gain is within the limitations of Allah's pleasure.

"Allah there is no god but He, the Living, the Everlasting. Slumber seizes Him not, neither sleep; to Him belongs all that is in the heavens and the earth. Who is there that shall intercede with Him save by His leave? He knows what lies before them and what is behind them, and they comprehend not anything of His knowledge save such as He wills. His Kursi comprises the heavens and earth; the preserving of them oppresses Him not; He is the All-high, the All-glorious" [2:255- sūrat l-bagarah (The Cow)].

The holy Quran always refers the heavens and the earth and what is between the heavens and the earth;

"Lord of the heavens and the earth and all that is between them! Therefore, worship thou Him and be thou steadfast in His service. Knowest thou one that can be named along with Him?" [19:65- sūrat maryam (Mary)].

O People do reflect and indeed those who fear God are scientists:

﴿ اَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا وَمِنَ الْجِبَالِ جُدَدٌ بِيضٌ وَحُمْرٌ مُخْتَلِفٌ أَلُوانُهَا وَغَرَابِيبُ سُودٌ (٢٧) وَمِنَ النَّاسِ وَالدَّوابٌ وَالْأَنْعَامِ مُخْتَلِفٌ أَلُوانُهُ كَذَلِكُ إِنَّمَا يَخْشَى اللَّهَ مِنْ عِبَادِهِ الْعُلَمَاءُ إِنَّ اللَّهَ عَزِيزٌ عَفُورٌ (٢٨) ﴾ سورة فاطر. "Dost thou not see that Allah sends down water from the sky, and WE bring forth therewith fruits of different colors; and in the mountains are streaks white and red, of diverse hues, and others raven black ?(27) Also, the people, the animals, and the livestock come in various colors. This is why the people who truly reverence GOD are those who are knowledgeable. Allah is Almighty, Forgiving [35:28 - sūrat fātir (The Originator)].

"Thanks are due to the Lord of the universes" [1:2- sūrat l-fātiḥah (The Opening)].

#### **ACKNOWLEDGMENTS**

My deep thanks are due to Allah and to my parents.

### REFERENCES

- [1] Quranic Arabic Corpus: seven parallel translations in English for every verse of the Noble Quran.
- [2] Math open reference.
- معاجم اللغة العربية: لسان العرب
- [4] The sun Wikipedia.
- [5] Hoyt D. V. and Schatten K. H., The Role of the Sun in Climate Change, New York: Oxford University Press, 1997, p.145.
- [6] Yousef S. M. and El Raey M, Bulletin De L' Institut D' Egypte Tomes LXXIV,p76 (1994).
- [7] Shahinaz Yousef, Yasser. H. O. Algafari and Ramy Mawad (2015). The Fifth international conference on Physics Research. MTPR-014. 15-19 Dec 2014 Cairo-Luxor. Editor Lotfia El Nadi.
- [8] Shahinaz Yousef, M.A. El Rafy and Juma AbdAllah Thani Al Hadabi (2015). Solar Forcing on Cyclones Case Study: Gonu 2007. The Fifth international conference on Physics Research. MTPR-014. 15-19 Dec 2014 Cairo-Luxor. Editor Lotfia El Nadi.
- [9] Yousef, S. In the Name of God Most Beneficent, The Merciful PowerPoint PPT Presentation. Climate Change over Africa, Alexandria 2005.
- [10] Yousef, S. M. (2006). 80-120 yr. Long Term Solar Induced Effects on the Earth, Past and Predictions,, Physics and Chemistry of the Earth 31, 113-122.
- [11] Shehri, S. M. A., Sabbah I., Yousef S. M., and Amin M. Y. (2013), "Solar Forcing On Nile And Cosmic Rays", Modern Trends in Physics. Edited by L. El Nadi, World Scientific Publishing Co. 978-981-4540-88-1, pp. 333-336,
- [12] Wikipedia: apparent magnitude.

- [14] Yousef S. signsinhorizons.com حسبانا من السماء, <u>A halo from the Heaven</u>.
- [15] Yousef, Shahinaz Moustafa (2005). The Invasion of Locust To Egypt: The Earliest And Latest Plagues. Proceedings of the Third Conference of Applied Entomology- I.S.B.N. 977-403-024-9 Cairo University- Faculty of Science-Department of Entomology pp 391-402.
- [16] Yousef, Shahinaz Moustafa (2006). El Nino and La Nina During 2200-1200 BC and 622-1467 AD As Deduced From Nile Records As Indicators of Past And Future Solar Induced Climate Changes. Proceedings of 8th International Conference On The Geology Of The Arab World GAW8 Vol. 1 pp 383-388.

- [17] Yousef, Shahinaz, Abdur-Rahman, Khadiga, Mounir, Mohammed and Mazloum, Moutaz 2010. The Nile in Ancient Egyptian epoch, LaNina and El Nino during the Times of the Prophets Yusuf and Moses. Proceedings of the 1st International conference on Ancient Egyptian Science, April 24-26, Cairo.
  - [١٨] ش. مصطفى :التأريخ العلمي لسيدنا يوسف وسيبدنا موسى عليهما السلام من أرصاد بحيرة. قارون.
    - [۱۹] الباحث عربي عربي لسان العرب.
- [20] Shahinaz Moustafa Yousef & Nahed M. Waly 2000: Cosmic Catastrophe As a Positive Indicator For Forest Knocking Down Prior To Petrification. Proceedings of GAW 5, International Conference On Geology Of The Arab World, Cairo Univ, El- Sayed A.A. Youssef, VolIII, pp 1555-1562.
- [21] Wikipedia after its references.

- [٢٢] قناة إنما يخشى الله من عباده العلماء تقديم الدكتورة شاهيناز يوسف الحلقة رقم ١.
- [23] Varshni, Y.P., Astrophysics and Space Science, vol. 43, Aug. (1976), p. 3-8.
- [24] Yousef, Shahinaz, Kamal M,Mansour, H. Sayeda M. Amin, Abdur-Rahman, Khadiga and Al Hassan Abd Al Monem (2011). The Moving Quasars. Modern Trends In Physics, editor Lotfia El Nadi . World Scientific.PP 273- 282.
- [25] Sirius transit data, The Sirius research group.

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