

Extraterrestrial Life and Sirius: A Scientific-Quranic Perspective

By **Bassel A. Reyahi**

Bassel Reyahi's book on Sirius and the Quran is a truly groundbreaking work that is currently available only in Arabic. In Arabic, it is entitled: Najm al-Shirā fī al-Qurān al-Karīm : wa-Innahu Huwā Rabb al-Shirā: mujizāt Qurānīyah jadīdah, published in Beirut : Dār al-Bayāriq ; Ammān : Dār Ammār, 1998, al-Tabah, 218 pages. Efforts are underway to have it translated into English. In the meantime, the following is an edited, brief summary of some of the salient points in the book, by the author himself. There are plans to not only translate the book into English, but to also expand it, with respect to further new discoveries from the Quran and remarkable statements connected with the early Muslims, in relation to the topic of extraterrestrial life and extrasolar planets. We hope to, therefore, update the summary in the very near future. Readers are strongly advised to read the article "Extraterrestrials in Islam", on the Optagon website (<http://optagon.page.tl/>), as a prerequisite, as this offers a foundation and an overview of this deep topic of extraterrestrial life and the Quran. The website also delves into other areas of Quran and Science. – Nadeem Haque, Optagon Publications Ltd., May 15, 2009.

This book is about Sirius in the Quran. Sirius is the only star mentioned in the Quran explicitly by name. It has two divisions: Part 1 deals with some basic astronomical information on related topics such as Procyon (another similar star system, the search for extrasolar planets, etc.). The chapter on Sirius contains comprehensive information on the star for both specialists and non-specialists.

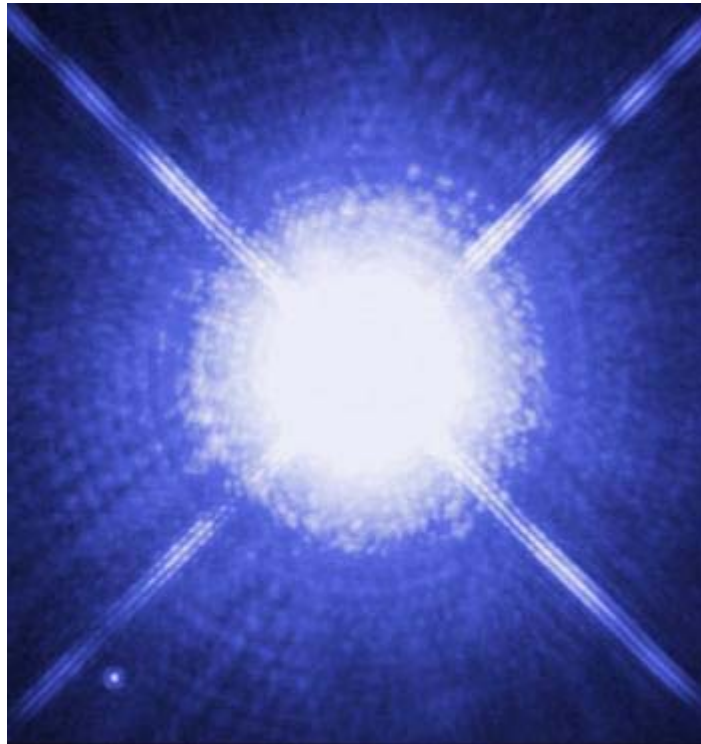
The second part is further divided into chapters that examine Sirius in the context of current scientific knowledge and enquiry. In addition, I engage in a speculative analysis with respect to future advances that might be made concerning our knowledge of this star system. Prior to the publication of this book, the subject of Sirius in the Quran had never been written about comprehensively before, other than an article I wrote in 1997 for a local newspaper. Also included in the second part, are two chapters on other scientific signs in the Quran that have a deep bearing, one way or another, upon the subject of Sirius. What follows is a very brief summary of the main points in the book.

Astrophysical Details of the Sirius System

Sirius, also called the "Dog Star", is the brightest star in the night sky having a visual magnitude of -1.46 (its absolute magnitude is 1.43). It has been one of the most studied and observed celestial object through the ages. Of the ancients, the Egyptians observed its helical

rising to time the flooding of the Nile. In modern times, Sirius was one of the first stars for which a parallax was determined and thus opened up the universe for further quantification. The current value of its parallax is 0.3777" which translates to a distance of 2.648 parsecs or 8.63 light years. Fredrick Bessel, when following the proper motion of Sirius, which was determined to be wobbling, inferred around 1844, the existence of an unseen companion. In January 31, 1862, the famous telescope maker Alvin Clark visually discovered Sirius B, also known as the "Pup", with a newly made 18 1/2" refractor.

The companion of Sirius A was very faint and its mass was determined to be about that of our sun, while the Sirius A mass was found to be about 2.15 times that of our sun. It was also found that the distance between Sirius A and Sirius B ranged from 7 to 20 a.u., completing one revolution around their barycenter in a period of 50 years.



Sirius A and Sirius B: Hubble Telescope photograph from NASA. Sirius B is at the lower left.

In 1914 W. Adams of Mount Wilson Observatory, obtained the first spectra of Sirius B and estimated its surface temperature to be about 8,500 K degrees, which is a little less than the 10,000 K degrees of Sirius A itself. Adams concluded that for Sirius B to be as hot

as it is, though very faint, while at the same time having a mass of the sun, it must possess a very high density. This conclusion came with the onset of the general relativity theory which predicted that a star of such a high density should have a measurable gravitational redshift. In 1919, the gravitational redshift of the sun was measured during a total solar eclipse mission, led by Eddington. Thereafter, in 1924 Adams measured the redshift of Sirius B to be 30 km/s, agreeing with general relativity theory and, in retrospect, validating the high density state of Sirius B.

In the 1930's, Chandrasekhar calculated that such densities as those of Sirius B are possible and could be maintained without the star collapsing to a singularity, according to the models being used, by what is called electron degeneracy pressure. Such stars with degenerate cores were named white dwarfs. For many years, only two white dwarfs other than Sirius B, were known. Since then, anything significant regarding Sirius A or its companion has been in refining existing data, but no new revolutionary observation has been made. In the early 1940's, Marshak showed theoretically, that Sirius B's size was less than half of that calculated previously.

In 1971, a study based on new spectra of Sirius B, Greenstein, Oke and Shipman, then all at Caltech, oblivious to Marshak's results, reached similar results in that Sirius B's size is less than that of the earth, and gravitational redshift was calculated to be more than twice the value calculated decades before, by Adams (about 81 km/s). Later on, George and Carolyn Gatewood of Alleghany Observatory made a thorough examination of the data on Sirius and its companion. They published a paper entitled: "A Study of Sirius" (APJ, vol. 225, No. 1, pt. 1, 1978). Most of the relevant data adopted in this book, is based on the Gatewoods' paper. The surface temperature of Sirius B as reported by both the Caltech team and the Gatewoods was found to be at least three times what was previously known (about 30,000 K^o). This high value was derived through many methods, including ultraviolet and x-ray observations from space. Recently, a survey by the ROSAT space observatory indicated the scarcity of hot white dwarfs, that is, ones as hot, or hotter than Sirius. This scarcity is unexplained and needs to be investigated.

Many ancient records, including Ptolemy's Almagest, refer to Sirius as a red star. This has perplexed modern astronomers, for Sirius is, and has been, at least since the astronomer Al-Sufi's time in the 10th Century C.E., a white-blue star. No current astrophysical explanation is possible with current astrophysical models. A change has certainly transpired on this binary star system due to a collapse of Sirius B, but according to current theories this could not have happened thousands or even tens of thousands of years ago, but happened 120 million years ago. However, due to our lack of knowledge on the evolution of stars, on limited data and modeling assumptions, such historical records should be taken seriously.

Background Information: Quran and Science

For Muslims the Quran is the revelation of God (in Arabic: Allah) sent down to Mohammed in the early 7th century C.E. The Quran, which millions of people read every day, is exactly the same book which Mohammed and his followers recited fourteen centuries ago. This fact is so solid that even the most critical scholars who are no friends of Islam (the Orientalists) acknowledge this. Among the lesser known things about the Quran is the abundance of scientific signs within its pages. In fact, many astronomical facts and signs pointed to, in the Quran, have remained obscure for centuries until they were discovered scientifically. To take an example, the creation of the universe from one compact entity (the Big Bang), is referred to in a chapter 21, verse 31, saying; “Have not the unbelievers seen that the heavens and the earth (i.e. the universe) were one compact piece (*ratq*) which We (God) exploded (*fataq*) and that We made every living from water”. Also, according to the Quran, the universe is a closed one which will be folded into a ‘singularity’. This is stated in the same chapter, verse 105: “The day when We (God) shall fold up the heaven (the universe) like a recorder rolls up a scroll: as We started the first creation (from one compact piece), so too shall We repeat it. It is a promise that We shall fulfill”.

The above remarkable scientific statements of the Quran are just a few of many mentioned in it that pre-empt recent scientific discoveries. The Muslims had not understood that their scripture had foretold the basic Big Bang model, for example, until scientists theorized about the Big Bang, and it is the same for other such advanced Quranic statements about science, etc. A lot has been written in the subject of scientifically pre-emptive verses of the Quran. Some Western scholars have also deeply researched the subject, most notably a French physician named Maurice Bucaille in a book titled “La Bible, la Coran et la Science” published in 1970s. However, Muslims and Non-Muslims alike only dealt with *already discovered* scientific facts. Little attention has been paid to stellar astronomy and none has dealt with Sirius in the Quran.

The Discoveries in the Quran

From childhood, this writer has always been interested in astronomy and absorbed and fascinated by the fact that the Quran has foretold astronomical facts which scientists discovered many centuries after its purported revelation. This is why my interest in

astronomy and vice-versa, in the Quran increased. Naturally, I had always tried to expand my knowledge beyond the frontiers of knowledge, and through this process I made some minor discoveries of the scientific signs in the Quran. However, in 1985, I started a thorough and systematic search in the Quran, recording all the verses which I felt pertained to astronomy, hence accumulating hundreds of verses on the subject. By studying these verses very deeply, I have been able to make many discoveries. However, by far the most important concerns the star Sirius (*Al-Shiira*). What follows is a brief account of the chain of discoveries made about Sirius in the Quran. Before starting, however, some background information is presented which will hopefully facilitate a greater understanding of the nature of the Quran, and therefore, of its connection to Sirius.

The Quran is divided into chapters, each called a *surah*. In all, there are 114 suras. Each one has a name, which is usually derived from the main subject dealt with in it, and each consists of verses (a verse is called an *ayah*). The shortest chapter is only 4 verses, while the longest is 289 verses. The number of verses is preserved intact, as has every single word in all verses, since the time of Prophet Mohammed. However, a very minor disagreement in this regard has occurred which stems from the following: Each chapter of the 114 chapters (except one) starts with the verse “In the name of Allah (God) the Beneficent, the most Merciful” which is called in Arabic *bismillah* verse. Because of the repetition of the *bismillah* verse at the beginning of every chapter, and because the numbers we use in counting the number of verses were not used then, some Muslims, after the Prophet, thought that this verse, *bismillah*, is only an opening of the chapters and is not to be counted as part of the total count of the number of verses in a particular chapter. Others, however, maintained that it must be counted. The latter opinion is more logical, since the *bismillah* verse is indeed a verse and therefore cannot be left out of the verse count. Accordingly, the verse count that we are adopting here is that which counts *bismillah* as the first verse of each chapter in which it appears, the only exception being chapter 9, the reason for which is not pertinent to the discussion at hand, and is connected to an entirely different topic. In this article the verse number will therefore include “Bismillah verse” as verse number 1. Therefore, for example, if I state a verse in the Quran about water, which is usually cited as chapter 24, verse 45, it will instead be referenced as 24:46, in order to be more logical and consistent.

The verse of Sirius (Al – Shiira) and the catastrophic collapse of a star.

In **verse 50 of a chapter 53 named “Al-Najm” (the star)**, it is stated that: “And He (God) is the Lord of Sirius”. The first scientific sign we deduce here is from the number of the verse – 50 – which we found to be an implicit indication to the revolution of Sirius’ system of 50 years. This has a support from another “fact behind number” also now well-known in the Quran. In Chapter 57 called “The Iron” and in verse 26, God reminds humans of His graciousness to them in “sending down iron which has an immense strength and benefits to humans”. We all know the significance of the number 26 to Iron, in that it is its atomic number, which is unique for each element! This is the only place where the word Iron is mentioned in the Quran, other than the chapter’s title, where this verse occurs. We also know that 57, the chapter number, is the atomic weight of one of the isotopes of iron. This same verse is also indicative of the fact that iron is the most stable element in nature, since it is the end point of nucleosynthesis in stellar cores!

In the opening of the chapter “The Star”, God swears by “the star when it has *collapsed*”. By studying this verse within the context of the whole chapter and from many correlations in the Quran, it has become obvious that the collapsed star relates to Sirius, mentioned in verse 50 of the same chapter! Sirius, of course, harbors in its system the collapsed star which was discovered only in the last century, which has since been known as Sirius B, or simply the companion of Sirius, the technical details of which were discussed above.

The binary stellar system: two risings and two settings

In the Quran Chapter 43, “The Ornaments” and in verses 37-40, God warns that “...he who will become blinded to our words, We shall attach to him a devil as a companion, who will detract them from the right path whilst they think they have been going straight, until when he [that is, the blinded one who became the devil’s companion] shall come to Us, he shall wish that the distance between him and his companion would have been as the distance between the two rises (sun-like rises). That day there will be no avail for them. They will share the same punishment”.

Two rises, and two sets, certainly occur in the horizons of planets – habitable or not – in a binary star. Therefore, the distance between the two rises is an expression of the

distance between the two stars in such a system; the source of the two rises. Previously, scholars of Islam interpreted the two rises as the rises of the sun in its solstice points, among a few others explanations. Such an interpretation is falsified in that: the devil and his companion, though having similarities, are no doubt two *different* entities. So, the source of the two rises must be two and not one, a condition only two stars can fulfill, but not *one* like our sun. God is “the Lord of the two risings and Lord of the two settings” as stated in verse 18, of the chapter “al-Rahman” (the Merciful). In studying the verse of Sirius and the above mentioned verses, I came upon a very important fact in that most verses in the Quran bearing the numbers 18, 39 and 50 usually have meanings related to the verse of Sirius and the “two rises” verses. Furthermore, the word “companion” or expressions meaning “double” appear in many verses numbered 18, 39 and 50. For example, in verse 50, chapter 51 it is stated that “We have created pairs of everything”. In conclusion, the two rises are an indication of the existence of planets – likely habitable – in binary star systems, in general. However, in particular, they imply the existence of a planet in the Sirius system, likely a habitable one, though with life on it being extinct due to the collapse of Sirius B. In the next section, I will discuss my reasons for this astonishing conclusion.

Extrasolar Planets and the ET’s of Sirius

The plurality of earths in the universe is explicitly stated in many verses of the Quran. Verse 13 of chapter 65, “The Divorce” says: “It is God who has created seven heavens and of the earth their like. His command circulates among them so that you will know that God is most able to do anything and that God has encompassed everything with His unlimited knowledge”. The seven earths are understood here as belonging to the same group, like a cluster or the galaxy and by no means stands for the number of earths (habitable planets) as being only seven; there may be millions upon millions of them spread throughout the universe.

Moreover, creatures (*dabbab*) – whose life is dependent on water are mentioned in the Quran as being dispersed in heavens and earths. In the chapter 42, “Al-Shoora” (the Counsel) God says in verse 29: “of His signs is the creation of the heavens and earth (the universe) and of whatever creatures (“dabbah”) He has dispersed in them”. *Dabbab* is defined in another verse (Chapter 24:46) in the Quran where it states that God has created every *dabbab* from water...”. This in turn excludes the angels and jinn from this definition.

The Sirius verse, “and He who is the Lord of Sirius”, is sandwiched between two groups of verses, each of which has a collective meaning of God’s Lordship of living and cognitive creatures there. However, from the second group, one can conclude that such creatures were destroyed, receiving the same type of fate as the humans on earth – indicated in the verses that deal with the tribes of Aad, Thamud, the people of Noah and the people of Lot. Other correlations of the existence of an extinct inhabited planet of the Sirius system are drawn from the many verses of similar numbers as the verse of Sirius and the verses of the “two rises” (numbers 18, 39, 50). Of particular interest is the civilization of “Aad” in which its destruction is described, directly following the verse of Sirius. Also in many other related verses (having numbers, 18, 39 and 50). “Aad” is distinctively mentioned. From these correlations I have concluded that the collapse of the Sirius companion into a white dwarf and thus the destruction of its habitable planet could likely have occurred at the time of the civilization of “Aad”. One of these verses that clearly supports this notion says: “We destroyed Aad, Thamud and the people of ar-Rass and many civilizations in between.” (verse 39 of the chapter 25, *Al-Furqan*). It is well-known that those civilizations were consecutive and contiguous to each other in time; so here on our planet very few other civilizations existed between the time periods stretching from the rise of Aad to the demise of ar-Rass, thousands of years ago. This being the case, the only meaning that can be attached to those civilizations stated as being “many” in number, could not have been a reference to those civilizations on earth at that time, because many not many existed. However, because of the relevance of this verse to the verse of Sirius and the fact that Sirius has been chosen to be mentioned in the Quran as a sample of the countless stars in the universe, then those “many civilizations” destroyed must be a reference to the many civilizations on the planet of Sirius which ended with the collapse of one of their two stars, that is, the collapse of Sirius B.

A clue to the Red Sirius Mystery

All of this gives credence to the ancient records which has Sirius recorded as a “red star”, Such information, on Sirius being red, need not be firsthand, as a result of observations corresponding to the specific epoch when they were recorded. Rather, such a stellar description could have probably been passed on from one civilization to another, until it reached Ptolemy in the second century.

So, what about Aad?

Aad is the first major civilization that flourished right after Noah's flood. This was a massive, though localized catastrophe, according to the Quran, that happened thousands of years ago. Aad is said to be buried under the sand dunes of the "Empty Quarter" in the southeast Arabian peninsula. One of their cities, "Iram" is described in the Quran as follows:

Do you not consider how your Sustainer dealt with the
tribe of Aad, and with the many columned Iram, the like
of which had not been created in the land before. (Quran 89:6)

An almost prehistoric civilization described in such an enigmatic way creates its own intriguing mystery! Recent excavations in Oman revealed a site named "Ubbar" which many wrongly assigned to the city mentioned in the Quran. Although "Ubbar" could have been a site in the domain of Aad, it does not seem to fit the majestic Iram. More thorough excavations are needed to reveal the true identity of the 'Aadites'. Indeed, discovering Iram would certainly validate the story of the Quran, for no other ancient record has ever mentioned Aad, including the Old Testament, other than the discovery in 1970's of an ancient Sumerian clay tablet excavated from the site of an ancient city called Ebla, in which it is recorded that the people of Ebla traded with a city called Iram, some 4,500 years ago. This Quranic correlation was first reported in *The National Geographic Magazine*, December 1978, Ebla, (pages 730 to 759) and is not known to have existed in any other literature or writings in the world, other than the recently discovered Eblan tablet. If Iram itself is ever discovered, it would be indeed amazing to find tablets that bore information relevant to Sirius, which many of the ancient Arab tribes used to worship! And if we ever visit the Sirius binary star system, will we find the remnants of the civilizations on that long extinct planet?

