

Explanation of Me'raj-un-Nabi (P.B.U.H.)

In the light of Modern Physics

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ABSTRACT

“Before the sunrise of Modern Physics, it was impossible to understand the concepts of time dilation and distance contraction. But Qur’ān explains these concepts far before the modern concept of Theory of relativity. This article explains the concepts of the motion of body moving with the velocity of light or its multiples. On the basis of it, how we can understand the happenings of Time Dilation and Distance Contraction during the distant motion on Lailat-ul-meraj?”

Why a person on earth measures the time of Meraj as instantaneous, while this time consists of many light years in space?

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On tenth year of the prophet hood on 27th Rajab, the Prophet (P.B.U.H) was taken for Isra and Meraj. The Holy Quran describes this journey as,

“Glory to Him who carried His servant by night from the sacred Mosque to the distance Mosque, the precincts of which we have blessed in order that we might show him some of our signs”.....⁽¹⁾

This verse of the Holy Qur’ān clearly shows (According to its grammatical structure) that it was not the whole night journey; it took an instantaneous time period. In the light of the theory of relativity we can express the mass to Energy conversion as,

$$E=mc^2 \dots^{(2)}$$

E=Energy

M= Mass

C= velocity of light

Velocity is defined as the rate of change of displacement and displacement is defined as the change in position of body from its initial position to the final position.

The velocity of light is described in the Holy Qur’ān as follows:

“It is He who made the sun a shining thing and the moon as a light and measured out its (their) stages, that you might know the number of years and the reckoning”⁽³⁾.

The velocity of light is 300000 km per second. In this verse the reckoning of the day is linked with time measurement motion in space while the measurement is taken on earth accordingly. So clear understanding of this terminology is given in Qur’ān as follows,

“He arranges affair from the Heavens to the Earth, then it will up to Him, in one day the space where of it, is the thousand years of your reckoning”⁽⁴⁾.

This means the 1000 times the velocity of light. From these verses and equation, we can understand the velocity of light in space.

Time Dilation

During Me‘raj Journey, how it became possible to complete the journey within an instantaneous time period? We can get the answer of this question in the light of Holy Qur‘ān and modern physics as follows;

Time is not an absolute quantity, it depends on the velocity of observer who is observing the two different events; theory of relativity describes the time dilation as

$$t = t_0 / (1 - v^2/c^2)^{1/2} \dots \text{ (5)}$$

Here

t=time observed in other reference frame

t₀= movement time of an object

v= the speed of the moving object

c = the velocity of light

According to this equation, if a body moves with 50% of the velocity of light, the movement time of an object dilates on earth as under,

If t₀= 50 sec then t = 56 sec

If t₀= 75 sec then t = 87 sec

If t₀= 90 sec then t = 105 sec

When V=C then “t” becomes infinity i.e. ∞

At 75% of the velocity of light,

If $t_0 = 50$ years then $t = 75$ years

If $t_0 = 75$ years then $t = 114$ years

If $t_0 = 90$ years then $t = 136$ years

It means a person on earth will measure the 50 years time of an object at 75% of velocity of light, as 58 years.

Examples of time dilation in the Holy Qur’ān

1. The Holy Qur’ān describes the effect of time on Hazrat Uzair A.S. as under:

Or like the one who passed by a town and it had tumbled over its roots. He said: “Oh! How will Allah bring everything to life after its death?” So Allah caused him to die for a hundred years, and then raised him up (again). He said: “How long did you remain (dead)?” He (the man) said:

(Perhaps) I remained (dead), a day or part of a day”. He said: “Nay, you have remained dead for one hundred years, look at your food and your drink, they show no change: and look at your donkey. And thus, We have made of you a sign for the people. Look at the bones, how, We bring them together and clothe them with flesh”. When this was clearly shown to him, he said:

“I know (now) that Allah is able to do all things”⁽⁶⁾.

2. About the deep sleep of As’hab-ul-Kahaf, Qur’ān says:

“Likewise, we awakened them (from their long deep sleep) that they might question one another. A speaker from among them said, “How is long have you stayed (Here)?” they said, “We have stayed (perhaps) a day or

part of a day.” They said: “Your Lord (Alone) knows best how long you have stayed (Here)”⁽⁷⁾.

By this, we can understand the concept of time dilation and possibility of Me’raj journey within instantaneous time period.

Distance Contraction

Distance is not an absolute quantity. It also varies with the velocity of observer who is observing the two different events.

Theory of relativity defines the distance as

$$L = L_0 [1 - (v^2/c^2)]^{1/2} \text{ (8)}$$

L = Distance observed in other reference frame

L₀ = Distance covered by an object

V = velocity of the moving object

C = velocity of light

At 75% of the velocity of light;

If L₀ = 50 miles then

$$L = L_0 [1 - (v^2/c^2)]^{1/2}$$

L = 33 miles

Similarly,

If L₀ = 75 miles then L = 50 miles at 75% of the velocity of light

If L₀ = 90 miles then L = 60 miles

At 50% of the velocity of light

If L₀ = 50 miles then L = 43 miles

If L₀ = 75 miles then L = 65 miles

If L₀ = 90 miles then L = 78 miles

Hence, it clarified the distance contraction of an object.

Example of distance contraction from the Holy Qur'ān

When Hazrat Soloman A.S asked his chiefs to bring him the throne of the Queen, before they surrendered themselves before obedience, a man replied to bring it within the twinkling of an eye.

“One with whom was knowledge of the scripture said: I will bring it to you within the twinkling of an eye”⁽⁹⁾.

The examples of distance contraction and time dilation explain the motion of an object with Fractions of the velocity of light, if a body moves with the velocity of light or with multiples of the velocity of light then equations result as,

If $v=c$ then

$$t = t_0 / [1-(v^2/c^2)]^{1/2}$$

$$t = t_0 / [1-(c^2/c^2)]^{1/2}$$

$$t = t_0 / (1-1)^{1/2} = \infty = \text{Infinity}$$

Similarly,

$$L = L_0 [1-(v^2/c^2)]^{1/2}$$

$$= L_0 [1-(c^2/c^2)]^{1/2}$$

$$= L_0 (1-1)^{1/2}$$

$$L = 0$$

Hence, at $V=C$ time becomes infinite and length becomes zero. It means if a body moves with the velocity equal to that of light then its time becomes undefined and distance becomes Zero.

if $v=1000c$ then

$$t = t_0 / [1-(1000^2 c^2/c^2)]^{1/2}$$

Also

$L = 0$ at $V=C$, according the formula described above.

Now we try to understand the motion of angel Jibril in the light of Holy Qur'ān.

Holy Qur'ān describes the movement of Jibril A.S. as under,

“The angles and Ruh, ascend to Him in a day the measure where of is 50000 Years”⁽¹⁰⁾.

This means the 50,000 times the velocity of light. From this we can just estimate the velocity of a moving object with reference of the velocity of light and its time dilated and distance contracted in the measuring reference frame.

Me'raj is an instantaneous time based motion

In first verse of surah-Al-Isra, it very obvious and clear grammatically that it was not a whole night motion.

Pir Karam Shah Al-Azhari wrote:

“The word “Lail” in the verse of Isra, is described with Tanveen-e-Taqleel which means that it was not the whole night motion, it was just an instantaneous time based motion”⁽¹¹⁾.

It was a miracle and still we can just estimate the concepts in the light of modern physics, realistically speaking it is still a miracle. Because miracle is defined as

“A un warranted idealism and optimism which finds the course of nature so wise and so good that any change in it must be regarded as incredible”⁽¹²⁾.

Now we can understand how it became possible to travel through heavens within a short span of time. The Holy Prophet (P.B.U.H) explained the whole journey and different narrations are there in the books of Hadith.

The Prophet (P.B.U.H) was asleep when angel Jibril came and took him to Ka'bah, his chest was opened and heart was washed with zam zam water and filled with wisdom and beliefs; the Prophet (P.B.U.H) said, "He then took out my heart. Then a gold tray of belief was brought to me and my heart was washed and was filled (with belief) and then returned to its original place. The Prophet (P.B.U.H) rode an anole like animal, which was called Buraq"⁽¹³⁾.

Conclusion

An object or a massive body moving with the velocity of light or its multiples can get the time dilated and distance contracted to the observer in other frame of reference. That is why a person on earth measures the time of Me'raj as instantaneous, while this time consists of many light years in space.

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