

The Gravitation is Responsible for Time Death

Dheeraj Sharma¹, Rajesh Kumar Mishra²

¹B.A.M.S. Scholar, Patanjali Bhartiya Ayurvedigam Evum Anuushandhan Sansthan, Patanjali Yogpeeth Phase 1 Haridwar, Uttarakhand, India

²Assistant Professor, Patanjali Bhartiya Ayurvedigam Evum Anuushandhan Sansthan, Patanjali Yogpeeth Phase 1 Haridwar, Uttarakhand, India (Corresponding author)

Abstract: *The gravitation is responsible for time death and the gravitation plays key role in aging. Gravitation also effects cell cycle division in our body and is also responsible for causing old age in our body. Gravitation also affects the efficiency of our body and also affects all physical activities. Gravitation invisibly envelops and cover our body organs which changed the effect efficiency of the body. Gravitation is a long distance weak force that slowly affects our body and organs. it play main role in generates inertia in our body. Gravitation produces a slowdown in the secretions and blood flow in our body. Gravitation obstructs the motion of the body and creates stability in the body. Most of the actions of the body of the human body are based on the force of gravity. Objective: The objective is to study and analyze the gravitation are responsible for periodic death. Data source: The gravitation is related literature from various Journals, articles and previous research papers related to this subject. Review Method: All the published and unpublished literature related gravitation and gravitation force reviewed by comparing and analyzing the different meaning and thoughts or classic as well as contemporary authors. Result and conclusion: This article highlights the effect of the gravitation for on the animal kingdom and what gain effect from the gravitation force.*

Keywords: Gravitation $F = G \frac{m_1 m_2}{r^2}$ gravitation force, Earth attraction, Newton's law

1. Introduction

The gravitation force is a major force of the universe and is the main aspect of the life of all living and non-living present in this universe¹ and the force of gravity is an important contributor to all the events happening in the universe², most of the actions of the human body are based on the force of gravity³, the gravitation is the main reason for the change of the state of all living and non-living⁴. Time and gravitational force move parallel to each other because the change of state of objects take place at the particular time and reason it happens is gravity⁵. Gravitation force procedure specific tension and attraction for all objects of masses⁶. Gravitation force is also called antimotion force and manifests inertia.

Aim

The aim of this study is to analyze and study the gravitation is responsible for time death.

The characteristics of gravitation force

The gravitation force is a Fundamental force.

It is the force of mutual attraction between two bodies by virtue of their masses, it is a Universal force, everybody attract every other body of the universal with this force according to Newton's low of gravitation the gravitation attraction between two bodies of mass in M_1 and M_2 and separated by distance r is given by.

$$F = G \frac{m_1 m_2}{r^2}$$

Where G is the universal gravitation constant.

It is directly proportional to the product of masses of the two bodies.

It obeys inverse square law and if is a long range force and does not need any intervening medium for operation.

It is the weakest force known in the nature and gravitation force between two bodies does not depend upon the presence of other bodies.

The gravitation force (i.e. it Act along the line joining the centres of the two bodies).

It is a conservative force (i.e. work done in moving a body against the gravitation all force in his path independent).

Gravitation force between two bodies is tough to be caused by an exchange of a particle called gravitation.

The gravitational force is also called and kinetic force because gravitational force is responsible for stopping the motion of every moving object and gravitational force is also called anti motion force.

Gravitational force is acting on all the mass objects of the earth and it cover and envelops the heavy objects.

Gravitational force is the major contributor to most of the activities occurring in living being and non living.

The gravitational force is tangential and formless force and the first law of Newton's are to tarry depend on the gravitation.

Unit and measurements of gravitation

Physical Quantity	Relation with other quantity	dimensional formula	SI unite
Gravitational constant's"	$\frac{\text{force} \times (\text{distance})^2}{\text{mass} \times \text{mass}}$	$\frac{MLT^{-2}L^2}{M \times M}$ ($M^{-1}L^3T^{-2}$)	Nm^2kg^{-2}

Gravitational mass

The mass of a body which determines the gravitational pull acting upon it due to the earth is called gravitational mass, it is defined by Newton's law of gravitation according to this law, the force of gravitation of the earth on a body of mass m is given by

$$F = \frac{Gmm_g}{R^2} \quad \text{or} \quad m_g = \frac{FR^2}{Gm}$$

Here m_g is the gravitational mass of the body which can be measured by using a physical balance.

Motion under gravity

Free fall

A body released near the surface of the earth is accelerated downward under the influence of the gravity in the absence of air resistance all bodies fall with the same acceleration near the surface of the earth, this motion of the body falling towards the earth from a small height is called free fall, the acceleration with which a body falls is called acceleration due to gravity and is denoted by g

Near the surface of the earth $g = 9.8 \text{ ms}^{-2}$

When a body falls freely under the action of gravity its velocity increases and the value of g , is taken positive.

Newton's universal law of gravitation

discovery of Newton's law of gravitation one day in the year 1665 seeing an apple falling from a tree Newton was inspired to think about the law of gravitation he thought that the force which attracts the apple towards the earth might be the same as the force attracting the moon towards the earth by comparing the acceleration due to gravity on the earth with the acceleration required to keep the moon in orbit around the earth etc.

Weight of body is defined as the gravitational force, with which a body is attracted towards the center of the earth,

$$W = mg$$

Statements of Newton's Law of gravitation

Every practical in the universe attracts every other practical with force which is directly proportional to the product of their masses and inversely proportional to the square of the distance between them, this force acts along the line joining the two particles.

Evidence in support of law of gravitation

Many of the results predicted theoretically on the basis of the law of gravitation are found to be in close agreement with the experimental observations some of such evidence are as follows.

- The rotation of earth around the sun or that of the moon around the earth is explained on the basis of this law.
- The tides are formed in oceans due to the gravitational force attraction between the moon and sea water.

- The times of solar and lunar eclipses calculated on the basis of the law of gravitation are found to be reasonably accurate.
- The orbits and periods of revolution of artificial satellites can be predicted very accurately on the basis of this law.
- The value of g varies from place to place on the surface of the earth in accordance with the law of gravitation.

Principle of Superposition of gravitation force

According to the principle of superposition the gravitational force between two masses acts independently and is not influenced by the presence of other bodies, Hence the resultant gravitational force acting on a particle due to a number of masses is the vector sum of the gravitational forces exerted by the individual masses on the given particle, mathematically.

$$\vec{F}_R = \vec{F}_1 + \vec{F}_2 + \vec{F}_3 + \dots + \vec{F}_n = \sum_{i=1}^n \vec{F}_i$$

Where $\vec{F}_1, \vec{F}_2, \vec{F}_3, \dots, \vec{F}_n$ are the gravitational forces exerted individually by n masses $M_1, M_2, M_3, \dots, M_n$ on the particle of mass M of each force is determined by the law of gravitation.

Variation of the shapes of the earth

The earth is not a perfect sphere, it is flattened at the poles and bulges out at the equator, so the equatorial radius R_e of the Earth is greater than the polar radius R_p by about 21 km.

Acceleration due to gravity on the earth is given by.

$$g = \frac{GM}{R^2} \quad [\because GM \text{ constant}]$$

$$g \propto \frac{1}{R^2} \quad \text{as } R_e > R_p, \text{ so } g_e < g_p$$

thus the value of this G is minimum at the equator and maximum at the poles, that is why the weight of a body increases when it is taken from the equator to the pole, the variation of g between the poles and equator is about 0.5%.

Variation of "g" due to other Factor

The earth's surface is uneven, it has mountains, plateaus and valleys, this causes a variation in the value of g moreover, the density of earth is not uniform, its inner core is heavier than the mantle, also the density of earth's crust varies from place to place the value of g is different at different places.

When G is measured accurately, its variation indicates the presence of oil and heavy minerals hence such studies are useful in oil and mineral exploitation.

Gravitational field

Two bodies attract each other by the gravitational force even if they are not in direct contact, this interaction is called action at a distance, it can be best explained in terms of the concept of field according to the field's concept.

- Every mass modifies the space around it, this modified space is called gravitational field.
- When any other mass is placed in this field, it feels a gravitational force of attraction due to its interaction with the gravitational field.

The space surrounding a material body with in which its gravitational force of attraction can be experienced is called a gravitational field.

The earth is surrounded by a gravitational field, anybody brought in this field experiences a force of attraction towards the centre of the earth.

The main effect of gravitational on the human body

The gravitational force generates inertia in our body day by day due to which our organs move towards inertia and inactivity.

Gravitational force in our body day by day creates difficulty in the organs and manifests the obstruction in the movement of the body parts.

The gravitational force of responsible for state and age difference changes in our body.

Gravitational force procedure stability in the body after a time.

The Slowness and blockage arising in all the activities in our body also arise due to gravitation.

The gravitation is a weak force applied other over a long distance which affects our body slowly.

Gravitational force also acts as Suppression in our body and also down to flued discharge and flued flow in our body.

Gravitational force is responsible for changes in our body according to age and change in human efficiency.

Gravitational force has a special contribution in most of the activities of all living beings and non- living and the speed of matter also depends or gravity.

Explanation of $F = G \frac{m_1 m_2}{r^2}$ according to panchmahabhut:-

Matter is moving upwords, usually fire, wind, descending, ground, water, multiplied by maximum (9/11)

$$F = G \frac{m_1 m_2}{r^2}$$

$$F = \frac{TAMAS \times TAMAS \times TAMAS}{(SATTVA + RAJAS) \times RAJAS^2}$$

$$F = \frac{Earth \times Earth \times Earth}{(Air \times Fire)^2}$$

$$F = \frac{3 \times Earth \rightarrow move \ downword}{(Air \times Fire)^2 \rightarrow move \ upword}$$

2. Conclusion

The gravitation is responsible for time death and gravitation is a long distance weak force that slowly affescts our body and organs, generates inertia in our body and slows the body flow and secretion in our body, gravity obstructs the motion of the body and creates stability in the body and gravity invisibly envelops our bodies.

References

- [1] HC VERMA Concept of Physics Bharti Bhavan Publishers New Delhi 4271/3 Ansari Road Daryaganj New Delhi
- [2] S.L ARORA New Simplified Physics Volume 1 Reprint 2017 Dhanpat Rai Co. (P) LTD. Delhi 10006
- [3] ,DC PANDE Understanding Physics Volume Arihant Prakashan Series Meerut ISBN 978-93-13-90-55-4
- [4] Davidg Simpson,Larry L. Simpson General Physics 1 Last Update; OCT 8 2020
- [5] Physics Text Book Part 1 Edition 2006 National Council Of Educational Research And Traning ISBN 81-74-50-508-3
- [6] Dr.Shelja Shrivastava Astanga Hridayam Edition 2015 Chaukhamba Orientalia Varanasi 221001
- [7] Dr.Brahmanand Tripathi Charak Samhita Volume 1 Edition 2020 Chaukhamba Subharti Prakashan Varanashi 110002 ISBN 978-93-81484-75-3
- [8] Dr. Keval Krishan Thakara Sushrut Samhita Volume 1 Chaukhamba Orientalia Varansi 221001
- [9] Charya Udayveer Shastri Vaisheshik Darshan Edition 1 Shree Pandit Gayan Chandra Ji (b.a) Sarvdeshek Press,.Patodi House,Daryaganj Delhi
- [10] Uday Narayan Singh,Surya Siddhant Edition Samat 2043, Shrimati Savitari Devi 170 g Block New Alipur Kolkata
- [11] Uttam Narayan Tripathi (b.Tech, Iit Kanpur), Morden Abc^t Of Physics New Edition 2020-2021 Morden Publishers , Mbd House 4587/15, Opp, Times Of India Daryaganj Delhi
- [12] Mtg Objection Ncert Physics Text Book, Edition 2022, Mtg Learning Media (p) LTD. New Delhi Coprate Office :- Plot 99, Sector 44 Institutional Area Gurugram Haryana.
- [13] Smart Errorless Physics Universal Physics Book Edition 2022, Ubd1960, Origenal Authentic Book By Universal Book Depot 1960.
- [14] Dr. K.l. Gomber, k.l. Gogia, Pradeep's Fundamental Physics Book Edition 2020-21, Pradeep Publication, Shyam Lal Road, Duryaganj Delhi.
- [15] V.k. Mehta, Rohit Mehata, s.Chand's Principles Of Physics. Revised Editions, Schand Publications ISBN 9788121919340.
- [16] D.k. Banerjee ISC Physics Book, Revised Edition Schand Publication ISBN:- 9789352532032.
- [17] Halliday/ Resnick/ Walker Fundamentals Of Physics 6 Edition, Authorized Reprint By Wiley India (p) LTD, ISBN 10 = 81 - 265 - 0823 -x. ISBN - 13 =978 - 81 - 265 - 0823 -5
- [18] B.k Pandey, Manoj k. Harbolo, t. Vijaya Krishana, t. Madhu Mahon, s. Chaturveti First Edition, 2019. Cengage Learning India Pvt. LTD.
- [19] Arihant Physics Hand Book, Arihant Publication Edition 2nd 2019 ISBN- 10 = 9313196484 ISBN- 13=978-9313196488.
- [20] Dr. Vs Bhasin Girjesh Giri, Neha Jindal Prachi's Conceptual Physics, Revised And Update Edition (2) 2019, Prachi India Pvt. LTD. ISBN- 10 = 8177305883, ISBN -13 = 978 - ISBN -13 = 978 - 8177305883.
- [21] Paul g. Hewitt, Twelfth Edition Conceptual Physics, Pearson Education 15 Sep. 2017 ISBN -13 = 978 - 9352861774, ISBN -10 =9352861779.

- [22] Rusty I. Myers The Basics Of Physics, Green Wood Press: Edition (Dec. 2005) ISBN – 10 = 0313328579 ISBN -13 = 978-0313328572.
- [23] Hugh d. Young, Roger A, Freedman, University Of Physics Education ISBN – 10 = 9353949297, ISBN – 13 = 978 -9353949297.
- [24] Holger Kubel, Behind Fundamental Physics An Ether Wave Model Of The Physical World, Lulu.Com(30 Jun 2013) ISBN -10 = 1300289058, ISBN - 13 = 9781300289050.
- [25] Serway / Jewett, Physics For The Scientists And Engineers 9th Edition, Cengage India Pvt.LTD. July 2017 ISBN -10 =9789389650672 ISBN - 13 : 9789386650672”
- [26] Albert Eitstein, Relativity The Space And The General Theory, Finger Print Publishing 15 Sun 2017, ISBN – 10 = 9788175994652, ISBN -13 = 978 -8175994652
- [27] Stephen Hawking, Black Holes, Bantan Publisher, Latest Edition July 2016, ISBN -10- 085750357x, ISBN -13- 978-0857503572”
- [28] D.C .Pandey, Understanding Physics, Arihant Prakasan, 14 April 2021, ASIN, BO8YXXSKB.
- [29] Ashish Arora, Physics Galaxy, 2nd Edition, (Jan 2019) G.K. Publication, ISBM -10 :- 8193975243, ISBn – 13 :- 978-8193975244.
- [30] All in one Physics CBSE Book, 8th edition Jan 2021, Arihant Publication, ISBN :- 10 9325299518, ISBN :- 978-9325299511.
- [31] Feynman, Leighton, Sands, the Feynman Lectures on Physics, Narosa Publishing House, Dec. 2008, ISBN – 10 :- 8185015821, ISBN – 13 :- 978-8185015828,
- [32] George Gamow, Gravity Classic and Modern Views, Genral Press, Jan 2018, ISBN:- 10:- 9388118480, ISBN – 13 :- 978 -9388118484,
- [33] James B. Hartle, Gravity Anintodution to Einstein’s General Relativity, 1st Edition, Pearson Publication, Jan 2003, ISBN – 10 :- 0805386629, ISBN – 13 :- 978-0805386622.
- [34] Charles W. Misner, Kips thorne, John Archibaed Wheeler, Princeton University Press, Oct 2017, ISBN – 10 :- 9780691177793, ISBN :- 13 – 978 - 061177793.
- [35] David Sang, Mike Follows & Sheila Tarpey, Physics for Cambridge IGCSE Course Book, Cambridge University Press, April2021, ISBN – 10 :- 1108888070, ISBN – 13 :- 978 – 1108888073.
- [36] A(zee), Einstein Gravity in a Nutshell, Princeton University Press, May 2013, ISBN – 10:- 978 – 0691145587, ISBN – 13 :- 9780691145587.
- [37] Scott Dodelson, Gravitational Lensing, 1st Edition, Cambridge University Press, Jun 2017, ISBN – 10 :- 1107129761, ISBN -13 :- 978 -1107129764.