



## READ WHAT SHOULD PAY ATTENTION TO THE SCIENCE OF PHYSICS

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### **Annotatsion**

the science of physics is divided into experimental and theoretical physics. Experimental physics and the laws adopted on the basis of experiments examines the new information takes. Theoretical physics describes the laws of nature, and will predict events o'rganiladigan explains events that can happen.

### **Keywords**

physics, energy, software, power, balance, natural asset, is the substance of.

Today the basic education stage in the sum of the physical information about the environment of physical knowledge, is regarded as a collection of elements tarbiyadagi certain scientific or educational information. When we say the elements of education and knowledge work, effort, power, sound, heat, elektrash, elektromagnetizm from the properties of light, radioaktivlik, such as energy-related pieces of information are provided.

Fundamental and applied character which is invariant in the physical education program the school of physical and educational materials identified variativ views, despite their actual they've ratio it should be noted that the solution does not have, that is.

Physics teacher at school, discussions with the results of the analysis also confirms that the physics of the lesson is on our minds.

**Physics** (German: φυσικός— "natural", φύσις (physis)— "nature") about being natural science is one of the most common laws of nature, the substance, its structure, learns the rules of movement and change. This natural fanidir of physics, but then the qonuiyatlar and is based on the accuracy of the calculations. It consists of the following main parts:

1. Classical mechanics
2. Elektrodinamika and classical field theory
3. Quantum mechanics
4. Statistical physics and Thermodynamics
5. Optics and Spectroscopy
6. Molecular physics
7. Atomic physics
8. Quantum field theory
9. Gravitational and the cosmologist
10. Used kalibrli fields and Supersimmetriya.

Teach students engineering and materials depending on the form of the movement, the science of physics, which are intertwined with each other, mutually the physics of fundamental particles of

physics, nuclear physics, atomic and molecular physics, the physics of gases and liquids, solid-state physics, plasma physics is made up of. Teach students: processes depending on the form of the movement of matter and material physics point and solid mechanics, thermodynamics and statistical physics, elektrodinamika, quantum mechanics, space quantum theory in the lobby.

The historical development of physics. 3 the period of the history of physics, you can learn to:

- 1) it is. from the times to the sixteenth centuries-the period
- 2) the period from the end of the nineteenth century from the sixteenth century. The science of physics in this period, generally, in classical physics, then name referred to;
- 3) the period from the end of the XIX century until the present time. Modern physics (physics or latest) belonging to the same period.

It is the study of various events and their causes. that are reflected in the works of modern scientists arrived incomplete. The VI century BC to the second century CE during the period from after the establishment of the substance of the atom, the subscriber about the concepts and ideas created (**Demokrit**, Epikur, Lukretsiy), the world system has been developed geosentrik (Ptolemy), electric and magnetic phenomena observed (Fales), statika (Pifagor) and gidrostatik technique laid the basis for development (Archimedes), illumination of the light of the law of return and the right spread chizikli opened in the IV century BC in Aristotle's work and the poet made to the end of the generations of the past. Aristotle, along with the advances in the creation of their weaknesses it is not the case. Experience the essence of it confessed, but her knowledge of a reliable sign that is ignored, that means the main attention in with the wise will know. Aristotle the creation of this side of church figures come to hand, to prevent the development of the science of the long period are shown. IX-scientific research in the sixteenth century will move to the center of near and middle east countries. In this period the development of the sciences, in particular physics to the development of central Asian scientists are a huge contribution. **Physics**, mathematics, astronomy and issues tabiatshunoslik Khwarizmi, Ahmad al-Temporarily, Farobi, Beruni, Termizi, Ibn Sina, Ulugbek, Ali Kushchicentral Asia and identifies in the work of other scientists. This scientific works of scientists on the physics, mechanics, geometry, heaven, mechanics, optics, and the study of the nature of various phenomena associated with it. Khwarizmi in the middle ages, the theoretical and practical tabiatshunoslik still in the period of secular subjects, advanced social-philosophical thoughts ijodkori out. It first academy of the east "Bayt ul Reason" ("Donolar house") took an active part in the formation of. Here, under his leadership, the Arabs and other nations, along with representatives of Ahmad al-Temporarily, Akhmad Abdulabbos Marvaziyas the central Asian scientists have conducted studies. "Algorithm" in the word "Khwarizmi" word Latin transkripsiya this was applied for the first time in solving algebra word problems. Ahmad al-Temporarily of heaven "of the movement of the body" book has been stricken in the IXth century, into Latin in the XII century in the XII century it was translated into other European languages and widely distributed. Ahmad al-Temporarily organization of the game in Europe is the period of the revival of the principles of scientific researchers from the works. The breaking of light and let it determine the return. Stereografik temporarily projective plane of movement of a heavenly body as the founder of the theory on the basis of the ratios of the sizes of some projective measure that can be proved. Also today in science, this idea astrofizika lost their value.

Biruni Earth revolves around its own axis and the radius of the earth proved that I made using own devices 6490 miles that is close to determine. Moddiylik in the world of it, the action, the types of particles of the atom from the atom to the next, the interaction of power, comparable to the method of determining the weight of the solids of inersiya cavity, atmospheric pressure, liquids gidrostatik of snow, rain and hail causes them to appear, energy circulation, elektrlanishi of solids, the ascension and decline of the sea and ocean water, which causes it to korpuskulyar and the texture of the waves of light, sound and the speed of light, light of the chamber and broken the return of the causes, and the dispersion of the event, the earth and the other planets move around the sun close to the shape of ellips, will maintain spatial vaznsizlik thoughts on solids. Abu Nasr al-Farobi the sound of speed, the nature of sound waves, sound frequency, sound waves of the music they created the thoughts and notes about the length of the lens based on the development of a large stock of many works on the science of physics is added. Ibn Sina nisbiyligi of the movement, inersiya, power, and mass tezlanish the connection between the rotary movement to the center of intilma power, chizikli speed, atmospheric pressure and cavity, in the nature of convective heat, heat transfer, types of,

types of lightning lightning and thunderstorms the event of sound and the speed of light, the dispersion of light, lens, atomic structure, and topics relevant to the modern concept review at work the other comes very gave to the majority of the toa nuva.

Hakim termizi as scientists learned prior encyclopedic worldly achievements of science, in particular, the analysis of the nature and process of accidents executive "Chronicles", "Haftanoma known as" works. Mirzo Ulugbek observatory in the world built in the xv century as a single. Her "Ko'ragoniy Zij" in the works covering the basics of astronomy and theoretical coordinates of the location of the three stars gave a very large precision 1018. Very close to the present value of its value.

The review of the understanding of physical phenomena developed under the influence of the ancient traditions of central asian scientists in mathematical methods of wide implementation experience using a big contribution to the science are.

The development of classical physics. Come to experience the mechanical movement of the sixteenth century by way of the g. galiley studied, identify the need to represent a mathematical formula based on the action and this is decisive to the development of the science of physics is motivation. It a body as a result of the interaction of speed change, tezlanish that is formed, the effect should not change the state of the environment in the absence of any action, that would be kept without change of speed or equality to zero of tezlanish is noted that the issue of owned to the idea of aristotle, that is, formed as a result of the impact speed will deny that. Newton's law or the law which determine Galiley later inersiya related to the first law of mechanics took the title. In 1600, gilbert gained fame in the u. with the study of electric and magnetic phenomena and magnetic proved that earth is living. It would be the turn of magnetic compass magnetic mili to resemble explained by the large land and magnetizm check the electrical interaction of the link that was. The principles of relativity in mechanics Galiley open and free is not related to its mass and the speed of a falling body tezlanish proved that. Torrichelli prinsipda from using the above E., atmospheric pressure and determine the presence of barometr first create it. Boyl and e. R. Mariott determine the first law for the elastic of gas and gas - Boyl-created the law of Mariott. Dutch astronomer and mathematician, V. Snellius (Snel) with R. Dekart broken the law opened to the light.

One of the greatest achievements of the sixteenth century is the creation of the physics of classical mechanics. To summarize the ideas of i. newton and his contemporaries in 1687 galiley members gave to describe the basic laws of classical mechanics. Newton introduced the concept of a physical body status by all is important to keep if full of solids and impulses through the mechanics in the condition of the system will create an opportunity to identify their coordinates. At the time of the initial condition and the body affecting him during the action you of the power of nature is known, based on the laws of Newton, the motion of the body can be without a compilation of the equation. This action using the equation from any of these solids in space in time, position, speed, and physical tezlanish sizes can be detected. Understand the movements of the planets Kepler newton on the basis of the law this law and the law of gravity through the months of the whole universe is open, the movement of the planet and the comet proved. Temporal and modal logic of action to keep the amount of poygens g. h. the definition of the law considered.

In the second half of the sixteenth century begins to create the basics of physical optics, telescopes and other optical devices was the creation of. A. grimaldi difraksion of physical light, while light dispersion i. newton survey. In 1676 Danish astronomer O. Ryomer measure the speed of light. From the same period of the waves and began to find the occurrence and development korpuskulyar theory of light. I. newton korpuskula light (particles)through action understand s, H. the environment, which I assume it Gyuygens — explained using the waves that spread in the air.

Thus, in classical mechanics in the sixteenth century has a strong position in the acoustic lens, magnetizm electric and heat in the study area of major research of the phenomena begin. Come and experience the eighteenth century to the mat.more widely used of the mechanics from classical mechanics and evolved with the rapid pace of heaven. The main purpose of explanation by the laws of heaven and earth phenomena, and the doctrine of the main mechanics knew. Even students who teach: a physical phenomenon can be explain by the laws of mechanics, if chosen were doing wrong or explain the way that is complete.

The particles of gas and liquids and solid mechanics in the eighteenth century along with the mechanics have evolved. Bernulli D. L. Eyler, J. and others were held on December gidrodinamik lagranj

ideal fluid. French scientist Sh. There are two types of electric dyufe identify and showed that their mutual pull and push. Franklin B. determine the electric charge stored to the law of american scientists. T. sh out of it and kavendish exception. Kulon fixed the interaction of the electric charge found in the strength of the experience and identify the mathematical expression of the basic law - the law of Kulon opened.

Russian fiziklar rixsi g., and B. Franklin and american scientists m. v. lomonosov, which is formed in the atmosphere, electricity, explained the nature of lightning. Galvanik A. A. Volta, and later the birth of v. petrov Russian fizigi and electrical engineering and rapid growth rates lead to the development of elektrodinamika's observations and surveys. P. i. works is because in the field of optics and laid the basis fotometriyaga lambers steam. Infrared (optical gershel of English v. U. Vollston of the chemist and English) and ultraviolet (English chemist i. Ritter) will determine the availability of light. The heat of the event, the amount of heat, heat capacity, heat conductivity, etc.k.has conducted a number of surveys for studying also. Lomonosov M., R. Boyle, R. Guk, molecular bernulli of the heat-were held on the basis of kinetic theory.

In the beginning of the xix century on the basis of the wave theory of light and frenel o. t. and yung difraksion interferensiya of light was created. The transverse elastic wave light that are spread in the environment, and the wave determines the intensity of light from the broken back Frenel determine the quantitative law. Malyus has discovered the phenomenon of French fizigi e. qutblanish of light, and the spectrum of light difraksion relevant researches. The fight lasted almost two centuries between theories about the nature of light and wave korpuskulyar is resolved in favor of the wave theory.

Galvanik and a. a. volta Italian scientists and they discovered for the first time in the world of electric current element galvanik to be made in the year 1800 in the development of the science of physics is of great importance. In 1820 the Danish physicist h. Ersted vine mutual phenomena of a conductor, the connection between electric and magnetic compass mili ta'sirda that would be explained with the presence of. The orderly movement of charged particles in the same year A. Amper all depends on which an electric current with magnetic phenomena appear due to the fact that the came to the conclusion, on the basis of experience and the vine representing the strength of interaction between the conductors which arise invented the law (the law of Amper). In the year of 1831 Faradey M. the doctrine of the concept of the electromagnetic field and electromagnetic induktiv the opening of the event created. The study of electrical conductivity of metal that have been the law of om (1826), the thermal properties of the substance study — led to the creation of the law of heat capacity.

All the phenomena of nature and the law of circulation of energy storage tabiatshunoslik connecting to the opening of a whole, in particular, is of great importance in the development of physics. By the middle of the xix century through the experience comparable with the amount of heat the amount of work done on the basis of mutual equality and this has proven to determines that a special type of heat energy. The theory of the law of the phenomena of heat and circulation of energy storage in the basic law is termodinamik technique the law of the first house is called. This law Yu.R. Vice described to form a more accurate brought gelmgols German fizigi g. (1874). Termodinamik technique in the development of S. Karno, Klauzius R. U. please thompson, E. d. i. mendeleev Klapayron and services are great. Hot karno determine that has turned into a mechanical movement of S. R. Klauzius, please heat the theory of the basic law of the u. thompson - termodinamik technique of the second general law of description, considered to Boyle R. E. Mariott, J. Gay - Lyussak, B. determination of the equation of state of an ideal gas Klapayron. To summarize, commanded by d. i. mendeleev all gases and so on.k. Thermodynamics of heat, together with the molecular-kinetic theory advancing. A. einstein, Polish and French fizigi Smoluxovski fizigi M. fun fact: the movement of heat is the movement of molecules and atomic mr. perret, j. broun, proving that the molecular-kinetic theory, which is the basis of a quantitative theory of the movement broun created. This, in turn, has led to a full recognition of statistical mechanics. The concepts of statistical probability based on the input character in j. k. maxwell has the speed of gas molecules, free running the length of the large number of conflicts in the unit of time opened the way to find the value of average azerbaijanis these and other, related to the average kinetic energy of its molecules was shown. L. be bolsman in the development of the kinetic theory of matter by statistical mechanics - to create statistics Bolsman bring. In the second half of the xix century K. J. Maxwell electromagnetic phenomena based on the concept of the electromagnetic field of the system of equations representing a new theory and created the appropriate. It is in the nature of electromagnetic waves the existence of clear, properties — pressure, difraksion of interferensiya of the speed distribution, and h



qutblanish.k. determine that there are. The most important result of the maxwell theory of the electromagnetic wave, which is equal to the speed of light the speed of the spread is the conclusion on the fact that it has the value. Maxwell and the electromagnetic properties of light from the theory stems from the fact that. G. detect electromagnetic waves harshly experiences on the government confirmed it. 1899-year P. Lebedev light pressure through the experience of determine. A. s. Popov in 1895 create using the maxwell theory in wireless communication. The correctness of maxwell's electromagnetic theory to the end of the above and other experiments made.

Thus, from 2 of the xix century physics is physics and physics of solids from the field of it. The physics of solids based on molecular-kinetic theory, if accepted, played a key role in the field of physics in the theory of electromagnetic field.

Matter in classical physics, time, space, mass, energy, and so on.k. special about the cross, concepts, laws, principles. It classical mechanics, classical statistics, classical thermodynamics, classical and other elektrodinamika to be. In classical mechanics, newton's laws of motion — Newton's law. The material point, the absolute solid-state, adjacent mux,the dogs, the concept plays an important role. Gave them the mechanics of the material point in the way the toa nuva, solid-state absolute mechanics, there are the mechanics of the adjacent environment.

That gives satisfactory results in many practical cases and has great speed on the events associated with the failure of classical physics to explain mikroob'yektlar. So a number of events of the solid heat capacity, changes in the nature and structure of the system of atomic physics and interaction of fundamental particles become to each other, the continuous change of energy mikrotizimlardagi cases, and other issues related to the speed of the mass is included. Similar events also properly of physics that can explain the new development above the new, to imagine noklassik bring. Such new physics is based on quantum field theory and relativity nazariyasiaan idea.

Noklassik be divided into physics and classical physics shartlidir. Galiley-Newton mechanics, Faradey-Maxwell elektrodinamika of Bolsman-Gibbs statistics, generally, in classical physics, modern physics, quantum field theory and relativity theory are introduced. From the historical aspect, this is truly so. But in classical physics with modern physics it is unreasonable to put against each other. New appliances, as to the position in space in the area will achieve significant improvements by using wide from classical physics. The study of electromagnetic phenomena, maxwell by the process of his "Classic elektrodinamika"with the creation of c was completed. J. thompson in 1897, please opener of a new era in the development of electronic physics of particles was the start.

Modern physics. At the end of the xix century identified a number of news (opening've electronic, electronic with the change of the velocity of the mass change, the system electromagnetic phenomena in moving the fountains and others that are taking place qonuniyat) newton's idea of absolute space and time showed that critical of you need to check out. Puankare J., h. a. Lorens like scientists conducted research in this area. M. Planck in 1900 the system which is being light — energy radiation that has a value and only rejected the idea of ossillyatorning classic continuous continuous of this energy value (kvanti network)is a completely new dangina assuming he argued. When comparing the experimental results with their theory accordingly determine compliance. A. Einstein, planck's hypothesis to develop, in the light irradiation, spread also when kvanti network — specific particles was formed from the idea that came. This was called the particles foton. In 1905 a. einstein theory in the interpretation of the phrase foton fotoeffekt the application of this technique in the science of physics in 1929-year-appears to be only recently uncovered. Thus, according to the theory of foton light wave (interferensiya, difraksion) and particles (korpuskulyar) feature.

Planck hypothesis in 1905 a. einstein to develop the theory of special relativity created. Rezerford of alpha particles in solids dispersed in 1911 e. check the experience that he proved the existence of the atomic nucleus and the planetar created a model of the atom. In 1913, Are known in atomic quantum N. holatlargagina have stable electronic network based on the character of radiation, the radiation energy does not occur in these cases postuladni create. Radiation from the second electronic state have been a stable a stable condition "jump pass"at, that is, on the basis of discrete eigenvalues for the expansions will take place. This postulat experience in government spent that year, frank j. and g. harshly approved. Quantum model of atom has a character shows that there postulati planetar.

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