

WHAT AIR FORCES HOLD THOUSANDS OF TONS OF WATER IN CLOUDS OR PHYSICS DEVELOPMENT SCENARIOS

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This article outlines basics of gas physics and at the same time includes description of microworld. The following is represented on the level of behaviour of certain molecules: atmospheric air pressure, moisture collection principle in clouds and atmospheric precipitation in the form of rain. Gravitation with regard to individual substance atom is explained. The article atmospheric air pressure formation mechanism is demonstrated in two comparative scenarios. The analysis has been performed and a more logical scenario has been selected. The reasons for lack of clear explanation of this natural process are specified. On the level of interaction of individual molecules and clusters their interaction is depicted along the border of below lying air masses and above molecular formations in the cloud. Forces and constructive features that have impact on moisture accumulation at certain height have been determined, including conditions that lead to atmospheric precipitation. Other matters that have contemporary solutions are revealed in course of research.

Keywords: molecular interaction, gas pressure, gas tension, gravitational forces, cluster formation

Comparison of two gas pressure formation scenarios

We all study physics at school. But how clearly is it outlined in textbooks? We need to answer the following questions.

How are clouds formed in the air where weight of water is thousands of tons? Why large amount of water flies over earth and does not fall until certain moment? Justified answers to these questions cannot be found in textbooks. They are not represented with regard to behaviour of individual atoms and molecules. There is also no description of formation of atmospheric air pressure on this level.

Gas formation in textbooks is represented predominantly based on molecular-kinetic theory. There are no other scenarios in textbooks.

In order to introduce other scenarios I propose to compare two scenarios of atmospheric air pressure formation and present explanation for reasons of moisture accumulation in clouds and many other matters.

Fig. 1 represents atmospheric air pressure formation based on molecular and kinetic theory. Wavy line below represents earth.

Small circles mean flying air atom (molecule) bodies and arrows represent direction in which they can transfer to. Gas pressure based on molecular and kinetic theory is formed through the energy of molecules heating surface. Participation of molecules that are on the surface that exceed average statistic distance between molecules in energy pressure may not be seen in this scenario.

Fig. 2 presents another possible scenario. Required basic data for explanation of this process is presented below – gas molecules are subject to gravitational forces and move away from each other. More detailed basic data for this sce-

nario will be presented below. It is worth noting that there is nothing unnatural in this scenario. Contemporary physics recognises gas molecule forces and acknowledges absolute ideal gas molecule movement as a result of these forces.

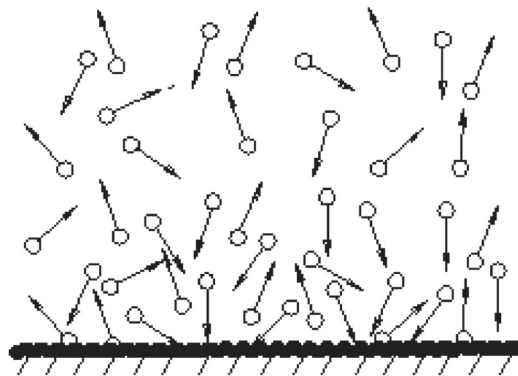


Fig. 1. Atmospheric air pressure based on molecular and kinetic theory

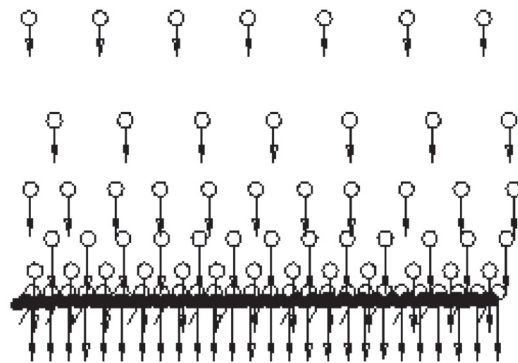


Fig. 2. Atmospheric air pressure passed on another scenario

Based on this scenario gas molecules above with their force fields on the force fields of lower gas molecules project total pressure on below molecules and all below surfaces. The arrows on this figure represent gravitational forces on each molecule. Gravitational forces weaken as a result of increase in distance between gas molecule (air) and earth. This factor is depicted as arrow length in this figure. Larger length represents larger force. The arrows demonstrate vividly that upper molecule pressure forces on below molecules decrease with height. As a result distance between air molecules away from earth surface increase. Based on the above total amount of air molecule forces above is added to increased forces with increased height.

Comparing these two atmospheric pressure formation scenarios we must state that gas pressure reasons and air depression with height are explained logically and vividly in the second scenario.

For more detailed comparison it is worth noting that based on molecular and kinetic theory gas molecules and atoms are chaotically moving in space even if gas is in equal conditions. It means that molecular and kinetic theory as a real model states that eternal flying particles that have certain weight are possible over earth without any energy in gravitational field! There is no explanation how this could take place and this is nonsense!

Any open vessel is filled with atmospheric air. By removing or adding gas into the vessel we may change its pressure on vessel walls in insulated vessel. If gas pressure is justified by forces, in these cases participation of distant molecules from the walls does not raise any concerns. However if gas pressure on vessel walls is a result of molecule strikes, it is vivid that direct participation of remote molecules cannot be traced. Their participation is only indirect. But indirect participation of physical factors is not reflected in the formulae! At the same time it is worth noting that in practical gas pressure computations kinetic energy of its molecules is never used. Empirical dependencies, that is, formulae that we use in real life, demonstrate that absolutely all atoms and molecules participate in gas pressure impact on vessel walls. I would like to stress that these formulae refer to any period of time. It means that they are true for each individual moment. Let's compare this concept with the following provision of molecular and kinetic theory: Movement of molecules in gases is chaotic: molecule speeds do not have any predominant direction and are distributed chaotically in all directions. Hence in accordance with this provision chaotic movement must be

in non-uniform molecule strikes on vessel walls. This should include both non-uniform gas pressure in time in one single plot and various plots at the same time. Such events have not been described anywhere.

Many others may state that true character of molecular and kinetic theory has been proven both from mathematical and practical points of view. Thesis [1] presents certain incorrect description of circumstances that is used in conclusion of main equation of molecular and kinetic theory. Adjustment of circumstances to achieve required results is evident. In addition to this, this thesis presents justification of reason for vertical thermal flows in gases and liquids based on level of atom and molecule behaviour that is convention formation process as a whole. Uniform distribution of thermal energy in any aggregate substance condition is presented in detail. That is, everything that is referred to entropy could be explained on the level of behaviour of certain atoms and molecules. There are multiple facts that state unreal character of molecular and kinetic theory in this thesis.

Practical proof of molecular and kinetic theory includes Stern test. This test uses oven, that is hot surface, that produces metal ions. This means that condition of balance is breached in this test. At the same time these test results are referred to permanent temperature conditions for some reason.

Second, metal ion speeds along straight surfaces are measured and they have no relation to chaotic movement of molecules based on molecular and kinetic theory.

Third, if cylinder sizes in this test were large enough, it would be discovered that ions under impact of gravitation were flying along the curve. However gas atoms and molecules also have certain weight. This means that without impact of certain forces from below and subject to gravitation they will fall on the ground in time.

Fourth, as metal ions coming out of hot metal were flying with the same speed, then their disintegration speed was measured in this test. It also must be stated that their flying is a result of potential energy forces, that is, disintegration forces.

Stern test summary

Based on explanation of this test in school textbooks and molecular and kinetic theory the following is true – if you through a stone, it will be flying eternally.

The reason for opposite conclusion is another important matter. In this case it is more important to understand that quality analysis of everything described in this articles and reference materials requires intelligent approach with fresh opinion.

Reference: According to F.S. Fitzgerald intelligent may be only that person who is able to keep two contradictory ideas in mind.

Introduction into basic data for proposed scenario

In order to explain moisture accumulation in clouds more detailed understanding of atmospheric air pressure formation theory is required.

It is not a secret that thermodynamics has been developed based on caloric theory. Caloric theory is mentioned rarely these days and often with full negation of the theory. It is believed that it has not supported Rumorf tests etc. I would like to state that all answers to questions as two why calorie has been argued have been found. However, the result is different from what is associated with this term. In short new thermal approach enabled to explain multiple physical processes, including those that contemporary physics still cannot explain nowadays.

For example, based on molecular and kinetic theory liquid molecules are in constant chaotic movement between each other. Their movement speed increases with increase in temperature. This leads to thought that molecules with increased speeds after strike fly at large distances. Based on this it is worth noting that this leads to increase of total amount of liquid. Such approach to explanation of liquid expansion specifies that expansion should be through increase of average distances between molecules. In other words – through increase of gaps between molecule bodies. But! The reference materials state that liquids changing their volume when heated maintain their ability for compression. This is not associated with increase in distances between molecules. In these cases maximum resistance will be built uniformly, and not through rapid change.

There are many examples when the process runs against molecular and kinetic theory. Many articles (for example (2)) present critics with regard to molecular and kinetic theory and simple solutions with regard to important matters for many processes, including, atom formation and their connections with others as well as optic events.

Basic data and essence of proposed theory

The proposed theory is called Thermal Energy Theory.

In Thermal Energy Theory everything is based on one basic assumption that there are thermal elements, that is, thermal energy elements that moving away from each other are attached to all the other elements. There are multiple elements. Therefore at this stage I will not assign them names and combine them under general name of material elements (mate-

rial elements or simply ME). The elements are very small and are included into particles that are currently referred to elementary. This means that the latter are not simply elementary. It also states that the elements are also included into all known atom elements (protons, electrons etc).

This presents all basic data used for explanation based on thermal energy theory.

We are all familiar with integration and disintegration forces in nature based on interaction of constant magnets. There is nothing unreal and unusual in basic assumptions of thermal energy theory.

And now the most important statement that transformed the vision that is associated with caloric term. During the period of selection of major model, that is when caloric theory was compared with molecular and kinetic theory based on their capabilities no one thought of a very important comparison. If operation of thermal elements is viewed not only in microworld, that is in interaction of atom elements between each other and interaction of atoms between each other, then one should remember that there is a large number of caloric elements under earth core. If there are forces between any two molecules (thermal energy to the element of the other) and disintegration forces, these forces must also be present between individual molecule on Earth surface and all those that are at depth.

This means that each molecule and each atom have both integration and disintegration forces with regard to Earth. Moreover, in this case thermal energy theory states that with changes in thermal energy elements in any substance (body) molecule integration forces toward Earth must change. And this is true! Reference materials [3, 4] and [5] present various tests in various countries that confirm changes in weight of materials with changes in temperature.

The above and materials [2] (that has not been yet translated into English) states that thermal energy force that plays a connecting role in atom and forms connections of atoms between each other, also has function that is currently executed by Hygs. Gravitation mechanism is clear in principle and many other questions that did not have answers also disappeared. For example, what conditions make electron to shift around atom core and what energy ensures atom links.

Multi-ton cloud formation reasons

Based on thermal energy theory atoms of various substances under uniform temperature have a varied number of thermal elements in their composition. This difference justifies formation of water layer in glass and lack of mercury wettability. That is, under uniform temperature both integration and disintegration forces

may form between atoms of various substances. If integration forces are present between various gas (air) atoms and other substances in gas, this forms a basis for cluster formation.

Air molecules have forces that they use to disintegrate from each other with regard to atmospheric pressure based on thermal energy theory. Let's take popular information that the whole Mendeleev system is in the air surrounding us.

Let's imagine that air molecules may have various element composition and various forms. Disintegration forces of molecules that have various forms and composition (clusters) signifies that they have large TET/TE ratio. In other words, disintegration forces of TET of one molecule to TET of the other forms certain force. Molecule elements or clusters may have significant variations in values of the ratio specified above. That is they integrate and disintegrate as for some elements value of this ratio is high and for the others it is low.

In addition to this, transformation of gas into liquid and liquid into solid substance in cold condition is easily explained as decrease in a number of TET in their composition decreases value of TET/TE. As a result a small number of TET in composition starts functioning as a connective component.

Due to complex structure of material frame molecules and clusters have complex force fields. The lines that may be used to depict similarity of these fields will have different curve character in plane around the border of their frames.

As there are various elements with various composition and TET/TE ratio from different sides of molecules and clusters, disintegration of these lines from the surface of material frame will be different. In volumetric model these lines look like complex false surfaces. As the distance from the frame increases, they become flat, but the element of shape incorrectness still remains to certain degree.

Let's look at static process in order to explain moisture accumulation principle.

Let's imagine that air molecules and clusters in the clouds that contain certain amount of water molecules do not shift against each other. Let's see what happens on the border of contact between air molecules and cloud clusters.

The above states that due to complex form of force fields air molecules and cloud clusters with their disintegration forces, have fixed their location and participate in restriction of location of neighbouring molecules and clusters.

This means that in order to each molecule (cluster) to move lower all above-lying air

molecules need to be moved away. I would like to stress that all moisture molecules in clouds demonstrate this feature. As a result air compacts under clouds. And large degree of compaction requires more forces to move away molecules that have been fixed in relation to neighbouring molecules due to complexity of their energy fields. Many of us noticed during the flight that clouds look more flat from below, than above. I assume this factor is also due to levelling of air surface under clouds under average pressure.

This means that moisture molecule in the cloud cannot move away air molecules underneath. This is possible only when the force of a majority of molecules (clusters) creates significant pressure between gas molecules for disintegration. This leads to rain from the cloud when gravitational force exceeds force of lateral forces that compact air in this place. Remaining moisture is also absorbed by this gap. Therefore, we often observe how rain starts falling in cone-shaped form. As the wind moving the cloud compacts it, rain starts falling from this particular cloud.

This process is more complicated due to flows, but described moisture accumulation process must also function in dynamic mode.

Conclusion

As a result, this means that gravitational forces form conditions for delay in rain falling from the clouds.

Having analysed the above we also can understand why after having found a large number of substances that also included into atom composition, we still do not have spatial atom model.

Scientists believe that one non-conformance is enough for the theory to be acknowledged untrue, and that experience may not confirm existing theory, but it can reject it. Why do not we use these recommendations with regard to what we are so used to calling eternal ideas.

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