

## ATMOSPHERIC PRESSURE AND THE CHARGE FIELD



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Abstract: I will show that atmospheric pressure is misinterpreted and that atmospheric weight is a myth. I will use my charge field to explain why the atmosphere in fact weighs nothing. In addition, I will show why the ionosphere exists as a separate layer, and precisely why it is above the stratosphere.

I have shown in many other papers how the standard model has covered up problems on purpose, and I will show another instance here. We are told that atmospheric pressure is not only caused by the weight of the atmosphere; it *is* the weight of the atmosphere. A column of air one square meter in cross section is said to weigh over 100,000 Newtons or 10.2 metric tonnes or 11.2 (short) tons at sea level. This leads any child to ask how the human body can stand up under so much weight. And if we do a websearch, we do indeed find an answer for children at a NASA information site:<sup>1</sup>

**Why doesn't all that pressure squash me?** Remember that you have air inside your body too, that air balances out the pressure outside so you stay nice and firm and not squishy.

That answer is so misleading I think we can call it an outright lie. The human body is not filled with air, except in the case of flatulent answers like this. The body is about 62% water, so the water must equalize most of any air pressure that exists. The body is made up of cells, remember, and cells are not filled with air. Cells can be as much as 90% water. Yes, the body contains oxygen that it gets from the air, but this oxygen is dissolved in the blood. It does not persist as air or continue to have air pressure once it enters the blood stream. Your lungs are the only things “filled with air” and only when you breathe in. If the air in your lungs was equalizing several tons of pressure, then when you breathed out your body would implode.

Let's go to a different sort of website: David Esker's site, which is often quite informative. David says this about atmospheric pressure:

The area on the face of an average adult's hand is about  $0.0116 \text{ m}^2$  or 18.0 square inches so there is about 1200 N (270 pounds) of force bearing down on an average adult human hand. Since the pressure is the same for both inside and outside of us, the net forces balance out to zero. Rather than weighing us down, we are indifferent to this force.<sup>2</sup>

We may be indifferent to this force, but David should not be so indifferent to the questions begged here. If we have 270 pounds bearing down on one hand, why doesn't that force register on a normal scale? Go look at your bathroom scale. The atmosphere should be pressing down on that scale right now. Why doesn't it register a number? That scale is probably about a square foot, so it should register about a ton, or 2,000 pounds. Why don't we have to re-zero all bathroom scales to 2,000 pounds? If we did that, wouldn't that mean that I really weigh 2,170 lbs?

The only remaining dodge at this point is for the mainstream scientist to mimic the NASA feint and claim the scale is full of air. "For the scale to compress, there must be space underneath it, and that space is filled with air. The pressure underneath the scale equals the pressure above it, so it doesn't register the weight of the air." This ridiculous argument is actually the accepted one: I am not making it up. The problem, if you don't already see it, is that these scientists have claimed the human body is also filled with one atmosphere of pressure, from air or otherwise; and if we weigh that body, it is standing on a scale also "floating" on air. Therefore the human body should also weigh nothing on the scale, according to this logic. If a column of air weighing 11 tons can be completely levitated by air pressure, why not a 170 pound man? The experts might say it is a matter of density, but neither Newton's nor Einstein's equations have a density variable in them. The force of gravity is supposed to be a function of mass, not density. If it is a matter of density, how does the field know I am denser than the column of air? Mr. Gravity is looking up at me and the column from underneath: how does he know I have more density than the column of air?

Or, return to David Esker's example. If I put my hand flat on a table, he claims there is 270 pounds of force bearing down on it. My hand is acting like a scale, and it "feels" 270 pounds of weight. But, like the scale, my hand is already pressurized. Why does my hand feel the weight but not the scale? If I lift my hand a fraction of an inch off the table, there is now air underneath it. Is my hand now equalized, like the scale? Do I now feel no force from the atmosphere? If I feel no force from the atmosphere, why does my hand not swell up to twice its size, like an astronaut in a hard vacuum without a spacesuit?

What if I lay my hand on the scale: am I to believe that my hand feels the force but not the scale? One of these scientists, whose name I will suppress to protect the idiotic, answered me that the top of my hand equalized the weight of the air, so that it was not transferred to the scale. The problem here, if you cannot see it already, is that if the top of my hand is capable of pushing back with 270 pounds of force, the bottom of my hand should be, too. In which case the scale will be feeling that force.

These scientists want us to believe that if we removed the atmosphere, we could wear cows as hats without stooping and could jump up to the clouds just by the strength of our calf muscles. If my outstretched arm can resist 800 pounds of atmospheric weight, then, without the atmosphere, I should be able to lift 800 pounds with one hand. Do you believe that? I don't. Can you lift 300 pounds with one arm, straight out to the side, on the top of a tall mountain? You should be able to, according to their math. Can you even lift a third more weight than normal at the top of a tall mountain? No, and it has nothing to do with being shagged out from lack of oxygen.

The answer to all this is that pressure and weight are two different things. Some mainstream scientists know this and are lying to cover it up, and some mainstream scientists just accept what they are told without ever questioning it or noticing how stupid it really is. The atmosphere is a gas. You do not weigh a gas by measuring its pressure. Pressure is a vector in all directions, and weight is a vector in one direction, down. Atmospheric pressure, as the name suggests, is a measure of pressure, not of weight. Yes, at sea level we have an appreciable amount of atmospheric pressure. But, at sea level and all levels, the entire atmosphere weighs nothing. It has mass, but weighs nothing. You can check this with any normal scale. Your scale is not lying to you, and the lack of weight requires no fancy explanation. The scale is registering no weight because it feels no weight.

What has confused many people, scientists and non-scientists alike, is that the barometer appears to be measuring a vector down, therefore it seems that the vector should be assignable to weight. From the time of Descartes and Torricelli, in the mid 17th century, most barometers have been columns of liquid, either water or mercury. Even today, the mercury barometer is the one most people visualize when thinking of atmospheric pressure. The aneroid barometer is now widely used, but its mechanism is not as explicit—it is circular and enclosed and it is not so easy to visualize how it works. When people have answered my attacks, they have pointed to the vertical column of mercury or water, insisting that the force of the atmosphere is clearly down. For example, in a Goethe device, the water is open to force from the top. But this vector is an accident of the mechanism, not a suggestion of weight. Liquid barometers are set up vertically, in opposition to gravity, as a matter of convenience—it keeps the liquid from spilling out of the tube or tray. But as we see with the aneroid barometer, we can turn the mechanism any way we like. The aneroid barometer can be set up either vertically or horizontally, achieving the same numbers, as you see from these pictures.



In the second picture, we have a barograph, in which five aneroid barometers are stacked. That is what the round gold things are. You can see that they are horizontal, while the first barometer is vertical.

The mercury barometer does appear to measure a summed force down, but, again, this is due to the fact that the reservoir is only open on the top. The mercury can't feel forces from other directions, because the containing walls are rigid and non-porous—the forces can't arrive from those directions. The summed force comes down from above, but it is not a downward vector. It is still pressure. It sums to the right number for pressure, due to the fact that the air collides with the inside walls of the reservoir, funneling all directions of pressure down. So the force is summed to the right value, achieving the same number as the aneroid barometer; but only the sum of the vector is down, and only due to the opening at the top. The barometer is measuring pressure, not weight. There is no real vector down.

All this is very clear, I think, so why have we been misdirected? We have been misdirected by top scientists—who do know what I have been telling you: they aren't ignorant of it—because the air column should have a weight, according to the current model of gravity. The standard model is correct in assuming that the column of air should have an appreciable weight, so they do some math and present us with a weight, hoping we forget to look at our scales. They cannot explain why the atmosphere fails to register on a scale, so they make up an absurd story to explain how a thing with weight can weigh nothing. They are missing a huge piece of the puzzle, and this piece prevents them from answering any questions sensibly. So they are forced to either dodge the question or to lie in a most unctuous fashion, like the Grinch with little Cindy Lou Who.

The piece of the puzzle they are missing is the charge field of the Earth. Physicists honestly don't know about the charge field. They have not been able to [a href="http://milesmathis.com/uft2.html"](http://milesmathis.com/uft2.html)unwind Newton's equation, to find the field there, and they have refused to publish or read my papers—some are accidentally ignorant and some are willfully ignorant. <http://milesmathis.com/charge2.html> The charge field solves this problem, like so many other problems, because it gives us a real bombarding field that can easily explain motions mechanically. The charge field of the Earth, like the quantum charge field, is mediated by photons. It underlies both the electric and the magnetic fields, at all levels, but is not equivalent to either one. I have called it the foundational E/M field, since it causes all motions that we have given to electromagnetism. The photon wind drives electrons and other ions, and these larger particles create measurable atomic and molecular motions. In some cases, the photon wind can cause measurable motions itself, without ions, but at the macro-level this motion is usually hidden, as we will see again below. The photons in the charge field have both linear momentum and angular momentum: the photons are also spinning.

Therefore, both the photon field and the induced ion field have angular momentum. The linear momentum of photons is charge, the linear momentum of ions is electricity, the angular momentum of photons is <http://milesmathis.com/weak2.html> symmetry loss or charge conjugation (it also stands for the neutrino pseudo-field), and the angular momentum of ions is magnetism.

The charge field of the Earth is a real emission field of real photons, and <http://milesmathis.com/moon.html> I have shown it has a field strength of  $.009545\text{m/s}^2$ , or a strength .1% that of gravity. This field is already included in Newton's equation, hidden in the mass variables and G, as I have proved in great detail in a series of other papers. As a vector, it is in direct opposition to gravity, being repulsive while gravity is pseudo-attractive. <http://milesmathis.com/uft.html> This makes Newton's equation a compound equation, and it makes his force a summed force of two separate fields.

I must remind my readers here that the charge field has long since gone past the status of a wild hypothesis. Newcomers to my papers may not realize that I have not only pulled it right out of Newton's equation, with simple math and postulates, but I have used it to explain the difference between the <http://milesmathis.com/magneton.html> Bohr magneton and the magnetic moment of the electron, to explain <http://milesmathis.com/orbit.html> the orbital distance of Mercury, the lack of a <http://milesmathis.com/venus.html> magnetosphere on Venus, and many other mysteries the standard model cannot approach and usually cannot admit to exist.

The charge field explains the zero-weight of the atmosphere because the levitating force is not pressure, but bombardment. In other words, the air is being levitated directly by the charge field, by a bombardment of photons.

Let me explain what I mean by "levitating force." Current theory tries to explain the zero-weight of the atmosphere on scales by one of two dodges. I have already ridiculed one dodge. The other dodge is that the lower atmosphere levitates the upper atmosphere, via air pressure. Each level is levitated by the level below it. The lowest level of the atmosphere is in equilibrium, being caught between the upper levels and the surface of the Earth. The air pressure of this lowest level pushes equally against the Earth and the upper levels, so the net force is zero. Scales exist in this lowest level, so they do not register a weight or force.

Again, I did not make this up. Many or most people are satisfied with that kind of answer, which makes one frightened for the future. Even someone with the intelligence of David Esker is satisfied with that kind of answer. He has not seen fit to question it. In fact, NO ONE has questioned it, that I know of. As I have shown in my book, hundreds of extremely transparent questions are begged in broad daylight, and thousands of truly despicable answers are posted to simple questions—as above with NASA—and no one ever budes an inch. Not only does your average web surfer not blink an eye, all the Russells and Feynmans and Godels and Hilberts and Wiles have passed them by without a pause—too busy with fake math to notice that the atmosphere doesn't register on a scale and things like that.

But just stop and analyze that answer for a moment. Gasses are hard to picture, so let us replace that lowest level of the atmosphere by Atlas. Say we let Atlas hold up the atmosphere. He puts one hand on the Earth and holds the atmosphere up with the other hand. Like the gas, he would create an equal and opposite force in each direction. And, also like the gas, we could sum those forces. Since they are in vector opposition, the vertical forces would sum to zero. So far so good. But now let us put a scale under his hand on the Earth. According to the answer above, the scale would read nothing, since the forces have summed to zero. Do you still believe that? Do you really think that one hand of Atlas could hold up the sky without creating any pressure on that scale with the other hand? If you believe it, you must also believe in the sky hook.

No, we have a real problem here. We have a reverse Chicken Little problem, since the standard model cannot explain why the sky is not falling. The sky has mass, so it should have weight, but it registers nothing on the scale. How is that possible? How can a column of air that weighs 11 tons fail to fall or register on a scale? Anything else that weighed 11 tons would fall and would register on the scale. If you propose that air pressure levitates the column of air, you must explain why that same air pressure does not levitate an elephant. If you claim that it is because there isn't enough air under the elephant to do the job, you imply that more air might do the job. If we took the elephant up to an altitude of five miles, would he be levitated then? Would he be partially levitated?

And that brings us back to the air in the scale. It was claimed above that the air in or under the scale was enough to levitate the 11 ton column of air. If the air under the scale can levitate an 11 ton column of air, why can it not levitate a 4 ton elephant?

The fact is, the atmosphere doesn't weigh anything, and the reason is that the forces up equal the forces down. The force down is determined by the mass of the gas, and the force up is determined by the charge field of the Earth. But even the force down isn't what we think it is. Before I show what the force up is, I must show that the force down has been miscalculated. When you read that the column of air weighs 11 tons per square meter, you may not realize how that number was arrived at. You may think that scientists weighed a parcel of nitrogen/oxygen gas at sea level, then summed up, accounting for known density losses at higher altitudes and the changing makeup of the gas. Or you may think they used the atomic or molecular weights of nitrogen and oxygen and so on, and summed up from that. But that isn't how the number was achieved. The number was achieved by assuming the pressure—as measured in a barometer—was the weight, and then summing from there. In an article at Suite101, Paul A. Heckert of San Diego State University says,

The value of the atmospheric pressure at sea level, combined with an understanding of the physics of weight and pressure, allows us to answer this question relatively easily...Multiplying Earth's surface area by the atmospheric pressure at sea level gives the total atmospheric force acting on Earth's surface. This total force is the weight of Earth's atmosphere. Doing the math gives the total weight of Earth's atmosphere of 1.2 E19 pounds or 5.2 E19 newtons. Dividing the weight in newtons by the acceleration due to gravity at the Earth's surface gives the mass of Earth's atmosphere, 5.3 E18 kg.<sup>3</sup>

You can see that weight is calculated straight from atmospheric pressure, as if pressure and weight were the same thing. This means that Dr. Heckert has no real “understanding of the physics of weight and pressure,” since he believes they are the same thing. Despite this he has written extensively on many subjects that concern weight, including articles for the *Astronomical Journal* and the *Gale Encyclopedia of Science*. Even if current gravity models were complete and correct, you couldn't use atmospheric pressure to stand for the weight of the atmosphere, for the simple reason that gas pressure is not weight. As I said before, and as everyone should know, the weight of a gas is not determined by measuring its pressure. I have reminded you that Newton's equation does not include a density variable, but it also does not include a pressure variable. You cannot substitute pressure for mass, like this

$$F = GMP/R^2$$

But that is precisely what these mainstream scientists are doing. Heckert divides the pressure in Newtons by the acceleration of gravity to get the mass of the atmosphere. Putting his last sentence into math, the equation would be:

$$P/g = m$$

He has substituted pressure for the force of gravity due to weight, to calculate the mass of the atmosphere. But that equation is a flagrant fudge. The substitution is outrageously illegal. If you could substitute pressure for the force due to gravity, then the atmosphere would have to weigh something on a normal scale, by definition.

We simply cannot use the measured pressure to find a weight, because the variables are independent. To find a weight of the air, we should determine the mass by direct means. If that is too difficult, we will have to find it from the other direction, by discovering the force up from the charge field.

We have two problems in that regard. I have calculated the charge field as an acceleration, not a force. My number is a percentage of g, not a force over any given surface area. Beyond that, this force does not balance gravity in the case of solids and liquids, so it is not clear at first why it could do so with gasses. As I said above, my charge field can only “levitate” about .1% of an object, relative to the solo gravity field. But to explain the zero weight of the atmosphere, it must levitate 100% of each molecule of gas. The force up must equal the force down.

As a first step toward a solution, I propose that all the mass of the atmosphere is not expressed as weight to begin with. That is, I don't believe the force down is as large as we have been told. Even if we correctly summed all the individual molecular masses in the atmosphere, I don't believe that summed mass would give us the real force down. The reason for this is that to apply Newton's laws to a gas, in order to find the weight of the gas, the gas must be fully contained. But the atmosphere is not contained in this way. It is fully contained only at the bottom. At the top, it is partially contained by the ionosphere and then the magnetosphere. And to the sides it is partially contained by the nature of the shell. The gas cannot escape to the side, that is, but it can more easily be deflected to the side, since only other gas is resisting it. There are no walls to the side. Unless the gas is very dense, sideways freedom is nearly infinite (as a gravitational curve). Since the atmosphere is not very dense, we may imagine that the gas is nearly unconstrained "to the side," this "side" being a full 360° no matter where in the gas you are. In this way, the atmosphere is freer to move to the side than up and down. One obvious side-effect of this is winds, which more often move laterally than up and down. But molecules must also move more easily to the side than up and down, and this must dissipate some of the effective mass of the gas sideways. Molecules moving laterally are not being weighed while they are moving laterally, you see, just as birds being carried by a truck are not being weighed while they are flying.\* A gas with more lateral freedom than vertical freedom must have less force down, even while its mass is constant.

A critic will say, "Why not just let all the mass dissipate by this mechanism and forget the charge field?" Because this mechanism cannot logically dissipate all the effective mass. To obtain a zero mass gas by this mechanism would require a gas that was infinitely unconstrained laterally and completely constrained vertically, and even then the weight would only approach zero. In any real gas, the weight could not be zero in any gravity field. If the field has any acceleration and the gas has any mass, some of the molecules must collide with the lower surface or with molecules below them, either of which will create weight.

But let us move on and look at the actual mechanism for charge field levitation of a gas. This phenomenon has been overlooked, not only because the charge field has been unknown up to now, but because nitrogen, which makes up 78% of air, is mostly inert. Both nitrogen and oxygen have low conductivity and very high electronegativity, being the second and fourth highest after fluorine. But it is not the chemical propensities of nitrogen and oxygen we should be concerned with; it is their E/M propensities that matter here. The first clue we have in this direction is the known paramagnetism of oxygen and the diamagnetism of nitrogen. The paramagnetism of oxygen is 2, about 1/10 the magnetism of aluminum. The diamagnetism of nitrogen is even smaller, and would normally be overwhelmed by the paramagnetism of oxygen. But paramagnetism and diamagnetism are properties in the presence of a magnet, and the charge field is not a magnet. So the given magnetic numbers of nitrogen and oxygen are not so interesting to us as the fact that both gasses are magnetic. They do respond magnetically to a charge field, aligning themselves one way or the other, and they respond more than many other elements and most other gasses. Only a few gasses, like NO and NO<sub>2</sub> are more paramagnetic than oxygen gas.

This simply means we have a possible mechanism for explaining a levitating effect above .1%. I have shown the charge field levitates everything that much: it would levitate an atmosphere made of lead .1%. But, due to the magnetic propensity of air, we can mechanically explain an effect beyond that. How much beyond that is the next question.

The first thing we notice in this regard is that the charge field of the Earth cannot levitate nitrogen more than oxygen or argon or other atmospheric molecules. It has to levitate them all the same, or else we would see a separation of gasses. We do see a separation of ions from gasses, since the charge field drives ions higher than gasses, pushing them up to the ionosphere. But we do not see separate layers of nitrogen and oxygen and so on. This means that the Curie constant and the paramagnetic numbers are useless to us here. The charge field is acting directly on the molecules: it is not acting through the electrical or magnetic fields. Meaning, the photons are driving the molecules by direct collision, without the mediation of electrons. To explain the equal effect on all gas molecules, we only have to refer to the ideal gas law. The atmosphere is a very large volume, so the difference in molecular sizes goes to zero. At equal pressure and temperature, the different gasses will respond to a particle field in equal ways, due to the fact that smaller molecules in the compound gas will travel faster than larger molecules, creating equivalent energies at collision with the field. It is also not beside the point that nitrogen and oxygen are right next to each other on the

periodic table. The atomic weight of nitrogen is 14 and of oxygen 16, so the ideal gas law doesn't have much work to do in that regard. Together, nitrogen and oxygen make up over 99% of the dry atmosphere. Water vapor has a molar mass of 18, which, again, is very close to the others.

Although I have no direct experimental evidence for it, I use visual and logical evidence to propose that the mechanism for levitation by the charge field—beyond the force of linear collision of photons with molecules—is caused by the angular momentum of the charge field. In my papers on quantum mechanics, I have shown that charge field photons must have spin. This spin creates the magnetic field in the presence of ions, and this spin causes symmetry loss in various “decays”. It gives us an additional effect here because, unlike molecules in solids or liquids, gas molecules are unconstrained—they are free to move in collision.

When the charge field acts on a solid or liquid, it can impart only a linear force. The linear force is summed through all the collisions, and acts on the object as a whole. But the angular force cannot be summed in this way, since it is transferred from each individual photon. Since each and every angular force is resisted almost completely by the molecules in the solid structure, it cannot sum. Besides, the summed force would be a lateral force, and in most cases this lateral force is resisted by friction. A book lying on a table cannot be moved sideways by the charge field, since the charge field would have to overcome friction in order to move it. The charge field is not nearly strong enough to overcome friction, even if we imagine it bypasses the solid structure of the object.

But since gasses are free to move laterally, being frictionless and without lateral structure, the charge field is able to move them laterally. In fact, because gas molecules are free to move in all directions, the charge field imparts spin to each molecule. Remember that, using the right hand rule, the magnetic field is actually circular around the electrical field. If the electrical field is moving straight up, then the magnetic field will be clockwise, as seen from below. Well, the charge field acts the same way. If the charge field is moving straight up, then the spin of the photons will be clockwise. In collision, they will transfer this spin to the molecule.

This gives us a new force and a new motion, because the molecule with spin will tend to move laterally, via this spin. A particle spinning clockwise, as seen from underneath, will tend to move to the right. This is because, in a series of similar collisions, the spin will cause a translational motion. This is known even in poolball mechanics, and it is caused by the fact that we are not dealing with point particles or perfectly elastic collisions. Even with photon collisions, we have a time of collision and a compression. This allows spin to impart translational motion. In other words, the direction of the molecule is changed by a series of spin collisions. In the end, spinning photons in the charge field will push the molecules at about a  $45^\circ$  angle, half of that caused by the linear energy of the photons and half of that caused by the spin energy of the photons. The two are at right angles, and the vector sum is in between. We know that the magnetic field has nearly the same strength as the electrical field, and so the charge field is effectively doubled. The spin of the photons augments the lateral motion of the atmosphere, adding to the effect I described above due to the lateral freedom of the gas. The gas was already dissipating effective force laterally, due to the shape of the field, and the charge field multiplies this effect with its spin component.

So, we have both a linear acceleration of the atmosphere of  $.009545 \text{ m/s}^2$  and a lateral acceleration of the field of about the same size. Since this lateral acceleration is not just a velocity, we don't just add it to the other lateral effect. We must multiply. Let us try to find an equation. Force up equals force down, so,

$$F = 0 = mg - E - L$$

Where E is the linear charge force (not the electrical force) and L is the weight lost to excess lateral motion. This equation cannot be quite right, since we take the variable m from Newton's equation, and in Newton's equation mass is already a function of two fields. In other words, the force of gravity proper is not mg, since mg is the the compound field force. However, this equation is a good first approximation: mg is only .1% wrong, as we know.

Now, we also know how to find E, approximately, since

$$E = ma_E = m(.009545 \text{ m/s}^2)$$

We have the same problem with  $m$ , but we can correct that later.

That leaves  $L$ .  $L$  cannot be calculated using existing equations, because it is not mathematically known how semi-containment of a gas affects its Newtonian or Einsteinian weight. This is not known even in simple situations, but here we have a confluence of unknowns, including not knowing how much the molecules are contained above, by ion layers, the Solar Wind, galactic bombardment, and so on; as well as not knowing how a complex shape—like a shell around a sphere—affects containment. To multiply our spin effect into the equation, we would have to know all these things.

But let us make some further assumptions, to see if we can arrive at some very rough numbers. These numbers may end up leading us in the right direction. Let us look at containment above first. As a first step, we can propose new theory for the ionosphere. Currently, the ionosphere is believed to be created almost entirely by solar radiation, but the given model cannot explain why ionization should start at about 50 km. Why is the entire atmosphere not ionized? Why is the ionosphere held at a distance, and, likewise, why is the magnetosphere at an even greater distance? Regarding the first question, it is thought that the atmosphere itself blocks radiation from coming nearer than 50 km, but there is no proof or even indication that it is capable of doing that on its own. Regarding the second question, there is no current theory to explain it.

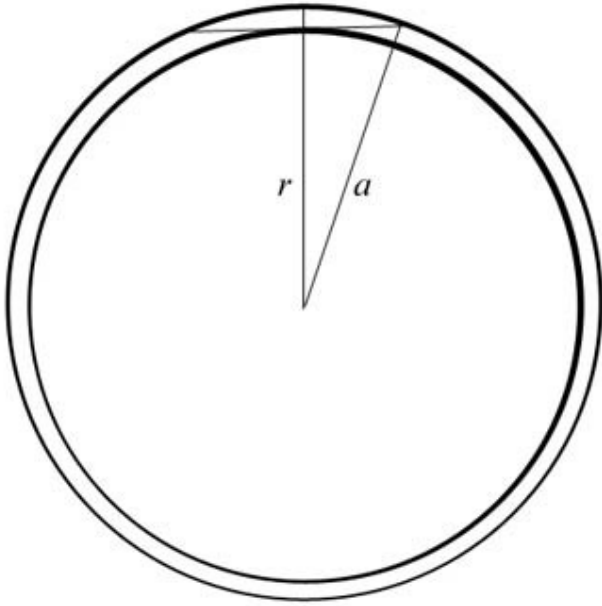
Obviously, my charge field supplies a mechanics capable of answering both questions, without dynamos in the Earth. My charge field is a summation of the charge fields of all the quanta in the Earth, so no dynamo is necessary.

Most of the ionization in the ionosphere is indeed due to solar radiation, I assume, but the placement of the ionosphere is not an accident or an outcome of solar radiation and the atmosphere alone. The Earth's charge field drives all ions above the non-ionized molecules, by a simple mechanism. Ions are created at all levels of the atmosphere, including at the surface, and these are driven up by the same process I have already explained. But the ions have a charge field of their own.

Ions are charged. What does that mean? It means that they are radiating photons. Molecules do not radiate many photons, and this is because the electrons in the shells are blocking radiation from the nuclei. Molecules are mostly neutral, as we know, so few photons are escaping the electron/proton exchange. But with ions, this is not the case. I have shown that electrons also emit the charge field, so negative ions will be creating a charge field, not just positive ions. Both negative and positive ions are emitting a positive, real, bombarding field of photons. Therefore, when ions encounter the charge field of the Earth, they feel a greater repulsion than molecules, and must go higher in the atmosphere. This is why the ionosphere exists above the non-ionosphere. The charge field of the Earth both seeds and limits the ionosphere.

So, although lots of molecules exist above 50 km, we may say that the molecular gas, as a whole, has a sort of boundary at around 50 km. Because the charge field pushes the ions above the non-ions, we may turn the equation around and say that the charge field pulls the non-ions below the ions. The charge field sets a semi-porous limit at around 50 km. This is confirmed by statistics, which show that a large percentage of the atmosphere— >95% —is below 50 km. Indeed,  $\frac{3}{4}$  of the atmosphere is below 11 km.<sup>4</sup>

That gives us the upper “wall” of our container. What about side walls? Well, we can find those, too, using the diagram below.



If  $r$  is the radius of the Earth, and  $a$  is the radius of the atmosphere at 50 km, then we can find the third leg of the right triangle very easily. It is 800 km, and we double it to find the full width: 1600 km. This means that the atmosphere has 32 times  $\{1600/50\}$  more lateral freedom than vertical freedom. But that is only in one plane. If we make our diagram three dimensional, we must square the lateral freedom, giving us  $32^2$ . If we assume this allows the gas to express only  $1/32^2$  of its weight, then we find a downward field of about  $.00958 \text{ m/s}^2 \{9.81/32^2\}$ . Remember that the upward field is  $.009545 \text{ m/s}^2$ . The two numbers nearly match already, which I would call astonishing. The spin of the charge field must supply only a small correction, another  $.00368$  to the equation. Force up equals force down:

$$F\uparrow = F\downarrow$$

$$x(.009545 \text{ m/s}^2) = .00958 \text{ m/s}^2$$

$$x = 1.00368$$

This variable  $x$  is not an acceleration or force, it simply stands for a lateral correction to the field. The spin of the charge field causes an increase in lateral motion over vertical motion of gas molecules, creating a further decrease in effective weight.

Of course this math is very rough, and is only meant to suggest the mechanism of atmospheric levitation by the charge field. Much more math could be done, but the theory is what interests me here, and it is now complete. Besides, the near match in numbers I got with my simple assumptions goes a long way toward confirming my field mechanism in this problem, as well as confirming once again my number for the charge field.

Conclusion: I have shown that the charge field is capable of keeping the sky from falling, by balancing the effective weight of the atmosphere. We no longer need to hide the fact that the atmosphere does not register on scales, since we have a simple mechanical explanation. We do not need to tell children (and meteorologists) that the human body is full of air, or that we are supporting one ton columns of air on our heads, like pillars of marble.

But if atmospheric pressure is not caused by the weight of the air above, what causes the greater pressure at lower altitudes? Once again, the answer is nearly self-evident, although modern scientists have found a way to miss it. We have more pressure near the surface of the Earth simply because the air is denser there. Pressure is directly proportional to density, as we can see from the ideal gas equation  $PV = nRT$ . If we hold temperature and volume steady, and raise the variable  $n$ —which stands for amount of substance (and which is basically mass)—then we must raise the variable  $P$ . We could rewrite the equation as  $P = (n/V)RT$ , and then let  $n/V$  be the density. Which gives us  $P$

= DRT. If you increase D, you increase P. The atmosphere is denser near the surface because it is *emitted* by the surface. Your exhaled breath is denser near your head than six feet away. It is that simple. The Earth creates its own atmosphere. Did you think the atmosphere was captured from space, from passing black holes? No, the oxygen and nitrogen are both "exhaled" by the Earth itself.

Of course, even this obvious statement is controversial, in this age of illogic. According to NASA, the nitrogen in the atmosphere comes from comet bombardments 4 billion years ago.<sup>5</sup> Once again, I am not making this up. You can't make things like this up, without brain damage. It is already accepted that atmospheric oxygen is exhaled by plants and by the oceans, so my density argument is already proved concerning oxygen. But why should we think that atmospheric nitrogen arrived extra-terrestrially? Simply because we can't explain it by known processes. We think we know everything about denitrification, so we start grasping at comets. But it is clear that our understanding of denitrification must be incomplete. I am not an expert on this subject, but I would suggest that the nitrogen cycle, like many other cycles, is imperfectly understood. We are told that the cycle begins with nitrogen in the atmosphere, but there is no evidence of this. It is simply an assumption. A better assumption, I would say, is that the cycle begins in the Earth, and that the Earth had a store of nitrogen to begin with. The atmosphere does not seed the soil, the soil and oceans seed the atmosphere.

Now, the Earth's nitrogen may have been seeded extra-terrestrially, by comets or otherwise. In fact, everything in and on the Earth originally came from space, since a planet is born from the galaxy like everything else. But the atmosphere cannot have been primary. Wherever the nitrogen came from, it had to be deposited first in the crust. Only then, by some process of denitrification, could it enter the atmosphere. Like the oxygen, it must have been exhaled. If current levels of ammonium and of autotrophic and heterotrophic bacteria (and other nitrobacters) cannot explain atmospheric nitrogen levels, then either the models are wrong or we had more bacteria in the past. Logically, the crust must contain enough nitrogen to continue to seed the atmosphere, else the levels in the atmosphere would be dropping. If you have a cycle like this, and one part of the cycle is nutrient poor and the other part is nutrient rich, the nutrient (nitrogen) will move from rich to poor, to create balance. Nitrogen would be moving from atmosphere to soil. We don't see this, and we have never seen this. Nitrogen levels in the atmosphere are not dropping, despite the 4 billion years since that proposed cometary seeding, and they have never dropped. If the comet had seeded the atmosphere directly, with molecular nitrogen, and if the Earth's crust had been nitrogen poor, the crust would have soaked up the nitrogen. It didn't, and still hasn't, so the model must be wrong. The crust has always been rich enough in nitrogen to support atmospheric levels. In fact, levels of nitrogen now are thought to be higher than in the past. Early atmospheric models show either high levels of carbon dioxide or hydrogen, in totals above the current 20% of oxygen. Recent models (from 2005) indicate as much as 40% hydrogen.<sup>6</sup> If nitrogen levels have risen 18% since, then the cometary model must be wrong. We would require cometary seeding since that time. In fact, we would require a nearly constant cometary seeding, to keep the nitrogen poor crust from soaking up all the nitrogen. It is much more logical to propose that the crust seeds the atmosphere than the reverse. If the nitrogen in the atmosphere is exhaled from the Earth during the nitrogen cycle, then we would expect denser gas levels near the surface, which is what we see.

I have also recently used the charge field to show [why hot air rises](#)—up to now, that question, like this one, has existed with a huge hole in its answer.

<sup>1</sup>[http://kids.earth.nasa.gov/archive/air\\_pressure/index.html](http://kids.earth.nasa.gov/archive/air_pressure/index.html)

<sup>2</sup>[http://dinosaurtheory.com/thick\\_atmosphere.html](http://dinosaurtheory.com/thick_atmosphere.html)

<sup>3</sup>[http://physics.suite101.com/article.cfm/weight\\_of\\_earths\\_atmosphere](http://physics.suite101.com/article.cfm/weight_of_earths_atmosphere)

<sup>4</sup>[http://en.wikipedia.org/wiki/Earth\\_atmosphere](http://en.wikipedia.org/wiki/Earth_atmosphere)

<sup>5</sup><http://image.gsfc.nasa.gov/poetry/ask/a11271.html>

<sup>6</sup><http://newsrelease.uwaterloo.ca/news.php?id=4348>

\*Yes, the birds would actually create downward forces by flapping, but molecules do not fly by flapping. Besides, the birds-in-a-truck problem is not properly posed. The truck needs to be very very large, so that the birds can

SOAR. Soaring birds would not add to the weight of the truck, since they are being supported by the air, not the truck. Some will say that the truck must support the air, but I have disproved that in this paper. A column of air 62 miles high weighs nothing on a scale, so a little air in a truck also weighs nothing, with a bird in it or not. The truck is not supporting the air, the charge field is supporting the air, which means the bird is also being supported by the charge field. Does an airplane flying over register on a scale? No. Mythbusters should install a scale on a runway, as easy proof of this. Soaring birds are weightless: that's why they are soaring!

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