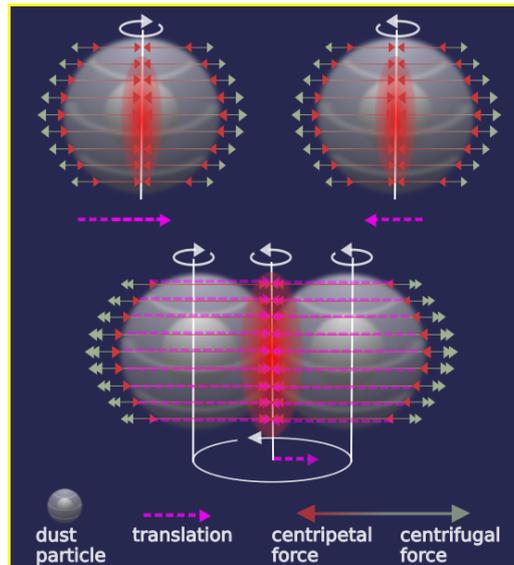


# The Making of Planet and Gravity

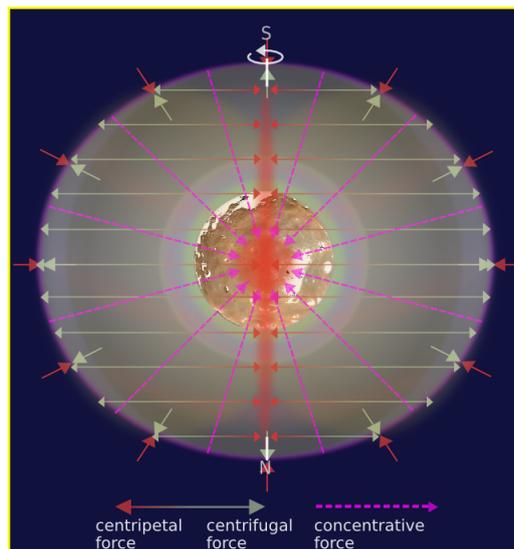
行星與地心向力的形成

Cres Huang

## From Particle Collision



## To Formation of the Planet and Gravity



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## Abstract

All falling body experiments show one overlooked fact,

*gravitational acceleration is independent of mass, shape, size, surface, and distance.*

Contrarily,

*attracting acceleration is dependent on mass, shape, size, surface, and distance.*

Therefore,

***"gravity is not attraction."***

Certainly, gravity as any force, is dependent of mass, however, gravitational acceleration is not. Shape, size, and surface are functions of mass and distance, gravitational acceleration would have to be independent of mass and distance, isn't it?

We know there were variables in the Moon. Such as radiations, charge particles, temperature, magnetic fields. Also Scott's body mass and motion, radio transmissions, static electricities on his gloves, spacesuit, hammer, feather, and unknown variables. None of the above had altered the fall in any significance. The only significant force acted upon hammer and the feather is gravity.

Galileo's ingenious inclined planes showed the gravitational acceleration is dependent on time, times-squared law, not distance. It would remain uniform regardless of the distance to the center of the Earth. All other falling body experiments clearly shown the independence of gravitational acceleration and it's mass and distribution of it's mass, *i.e.* shape, size, surface, and distance.

On the other hand, the easiest attraction force most, if not all, of us have played is the magnets. Soft magnetic putty shown by YouTube user Steve Bartlett is an excellent slow motion of magnetic attraction. It has clearly showed that the magnetic attraction is dependent of mass, size, shape, surface and distance. Nevertheless, unless there is perfectly balanced count-acting force, it is impossible to keep all attracting objects to maintain their relative positions at distance.

Gravity is a force of all elements moving toward a target in uniform acceleration regardless of their differences in composition, shape, size, and distance. Only one momentum can build such one way concentrative force, head-on congregation from gentle pairing to high speed collision. It can be started by electromagnetic attraction-repelling or disturbance in the environment. A terrestrial planet, for example, could be the coalition of dust particles initiated by static electricity. It can also be triggered by reacting to the external disturbance. The coalition builds the body and the force of keeping it together, gravity.

Analogous to rolling a snow ball in space, objects in the path would be picked up. The larger the snow ball grows, the tighter it gets. Matter and the force of union would be incorporated. Dust particles build sand, then rock, and so forth, along with gravity. The force, or energy, is trapped within the structure. All joined elements share this center aiming potential, gravity. Meanwhile, the gathering of mass and energy forms an activity center of building structures and emerging of a plant.

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# 1 Introduction

We all feel this intimate force. However, it is somehow mystified. Current theory considers gravity is a natural phenomenon by which physical bodies attract with a force proportional to their mass. By current theory, gravity can be described as:

- 5 • A constant distance-reaching attracting force among masses.
- It is proportional to the product of masses.
- It is inversely proportional to the square of the distance.

However, this tug-of-war without a rope concept of gravity raised many contradictions. If the gravitational attraction of the Sun could reach Neptune and far beyond to the edge of the Solar System, how could force of such magnitude be so weak comparing to other forces?  
10 We all feel the contact force of compression and weight of gravity, how could it be so illusive that we cannot replicate and measure it's attraction? On the other hand, electromagnetic forces is easily replicated and measured. Why it can overpower gravity, yet of such short reach?

15 We all feel it's squeeze. However, it is not an attraction force (Please refer to Appendix Section-10 for brief study of gravity paradoxes). It is a concentrative momentum of equal velocity. All elements are moving toward a target in uniform acceleration regardless of their differences in shape, size, composition, and distance. As any other force can not exist without mass, I don't believe gravity can come from nowhere. It has to be built together  
20 with mass to form a structure. Only one momentum can build such one way concentrative force, head-on congregation from gentle pairing to high speed collision. It can be started by electromagnetic attraction-repelling or disturbance in the environment. The gathering builds a body and force of coalition. It grows in the process of construction, from elements to components, from sub-structures to structure; And, the force of keeping the structure  
25 intact. All joined elements share this center aiming potential, gravity.

---

## 2 Formation of Planet and Gravity

Analogous to rolling a snow ball in space, objects in the path would be picked up. The larger the snow ball grows, the tighter it gets. Matter and the force of union would be incorporated. Dust particles build sand, then rock, and so forth, along with stronger squeeze. The force, or energy, is trapped within the structure.

I believe it is easiest to study the gravity from the birth of a terrestrial planet like our Earth. Just as a concrete building starts with grains of sand, and a living organism begins with a single cell; A terrestrial planet starts with tiniest rocks, free moving dust particles in space.

Say, in a region of dense nebula, disturbance is raised by electromagnetic force or a change of it's environment. Static electricity could be generated by rubbing of particles. And, two dust particles are propelled to meet. They bind together as depicted in Figure 1. A larger dust particle is bound and the sum of dead-lock force is stored. Here dust particle is depicted in it's electromagnetic sphere. The results is the combined mass and force. The force of collision will be distributed to translation, spin, and compression, Figure 2. Note the combined magnetic field is not shown here. It will be studied later.

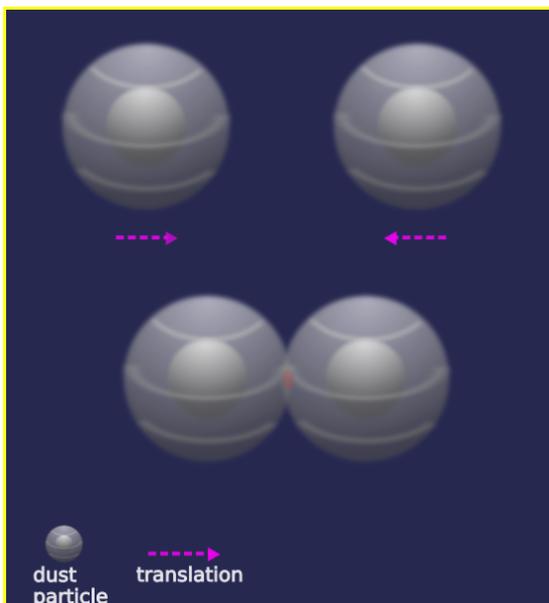


Figure 1: Dust Particle Coalition

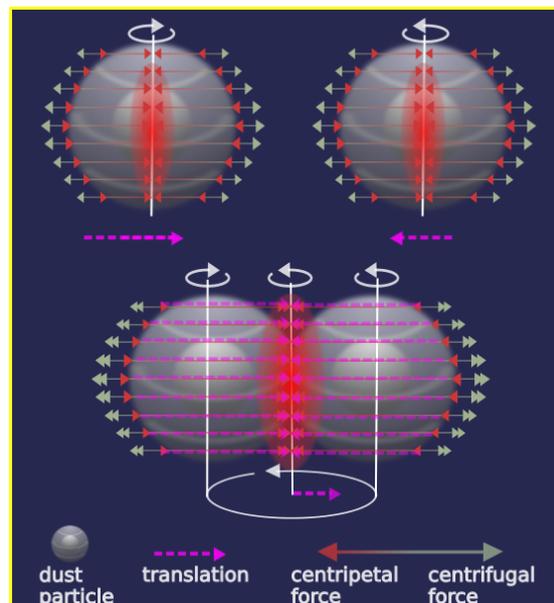


Figure 2: Combined Mass and Force of Coalition

To simplify the study, I will start with the kinetic force of coalition. When dust particles continue to bond as shown in Figure 3. It will be compressed into rock by cumulated force of binding, Figure 4. The same process will create numerous rocks, boulders, and so forth.

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The bonding force will continue to cumulate as the rock grows. I will call this head-on force from all directions, concentrative force.

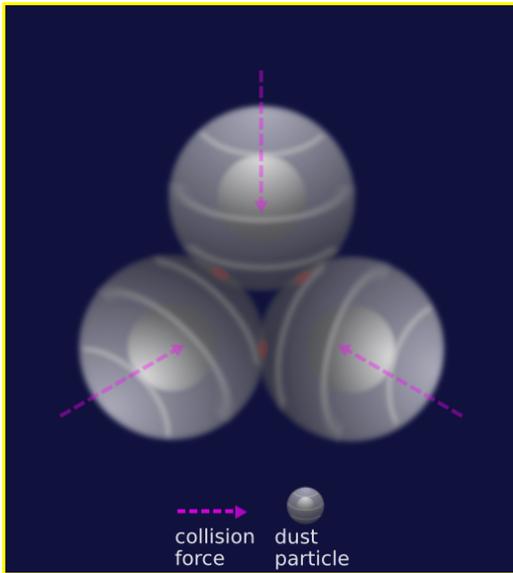


Figure 3: More Coalitions

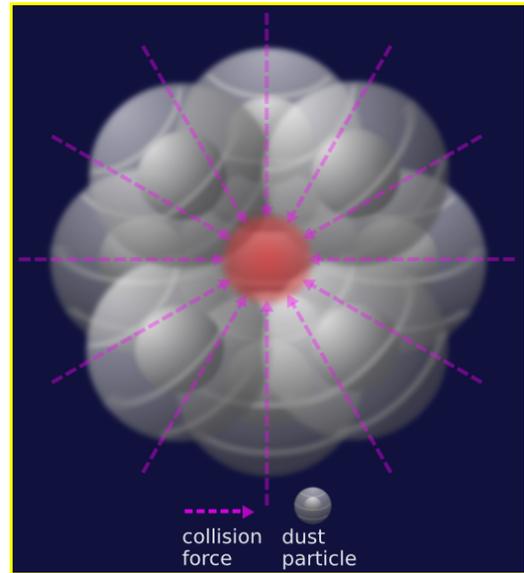


Figure 4: Rock Formation

The binding of dust particles is unlikely to cause destruction in early stage. Just like rolling snowball in space, the process can be gentle. However, as a rock grows, it's structure will be more vulnerable to collision by rocks with large enough mass. The result depends on the mass, momentum, and angle of the incoming rocks. It could be gentle coalition to violent collision. Larger chunks might be chipped off, however, some pieces, particularly particles would penetrate deep and remain. Hence, new composition will form. Basically, there are two outcomes from the collision of rocks.

- Constructive, the surviving rock has equal or larger mass then before.
- Destructive, the surviving rock has smaller mass then before.

In both cases, the process will continue. Eventually, a dominating rock could be built. Destructive collision could slow down, since larger mass can withstand more impacts. The result of a constructive coalition is:

- Increased mass.
- The composition is altered. Similar to kneading and pounding dough or metalworks forging, the process and result is determined by the ingredients and labor.
- Combined momentum. The force of coalition is distributed into three parts:

---

65

1. Increased concentrative force. This is the dead-lock force of bonding, gravity.
2. Rotation caused by off-center impact. Centripetal and centrifugal force is generated. It can increase or decrease depending on the incoming momentum.
3. Altered trajectory and translation. It can be acceleration or deceleration.

### 3 Nomad Planet and It's Gravity

70 Under the right condition, a large rock will grow into a mass the size of a planet. Denser element will push in and lighter one will be squeezed up. At this stage, all elements bound with the planet will share the intrinsic momentum of concentration. It is the primary force of binding all elements together. And, a nomad planet and it's gravity is formed, as shown in Figure 5. It is composed of layers of elements from thinnest particles at top to most dense  
75 elements at the core.

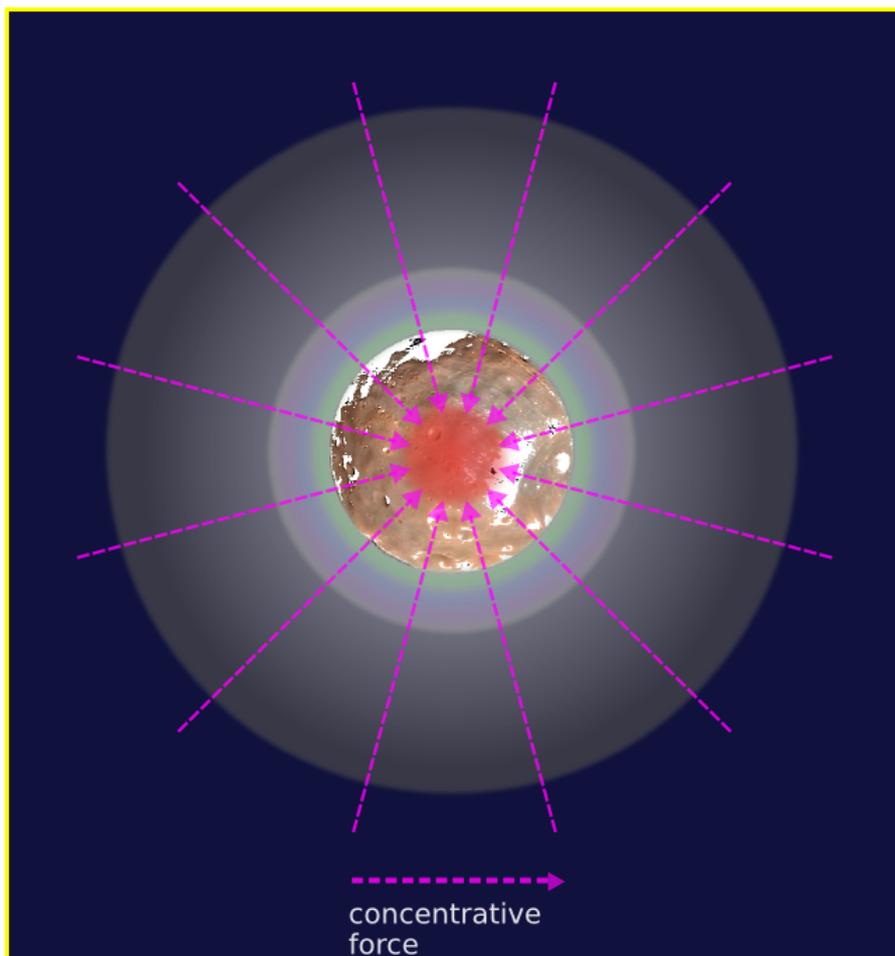
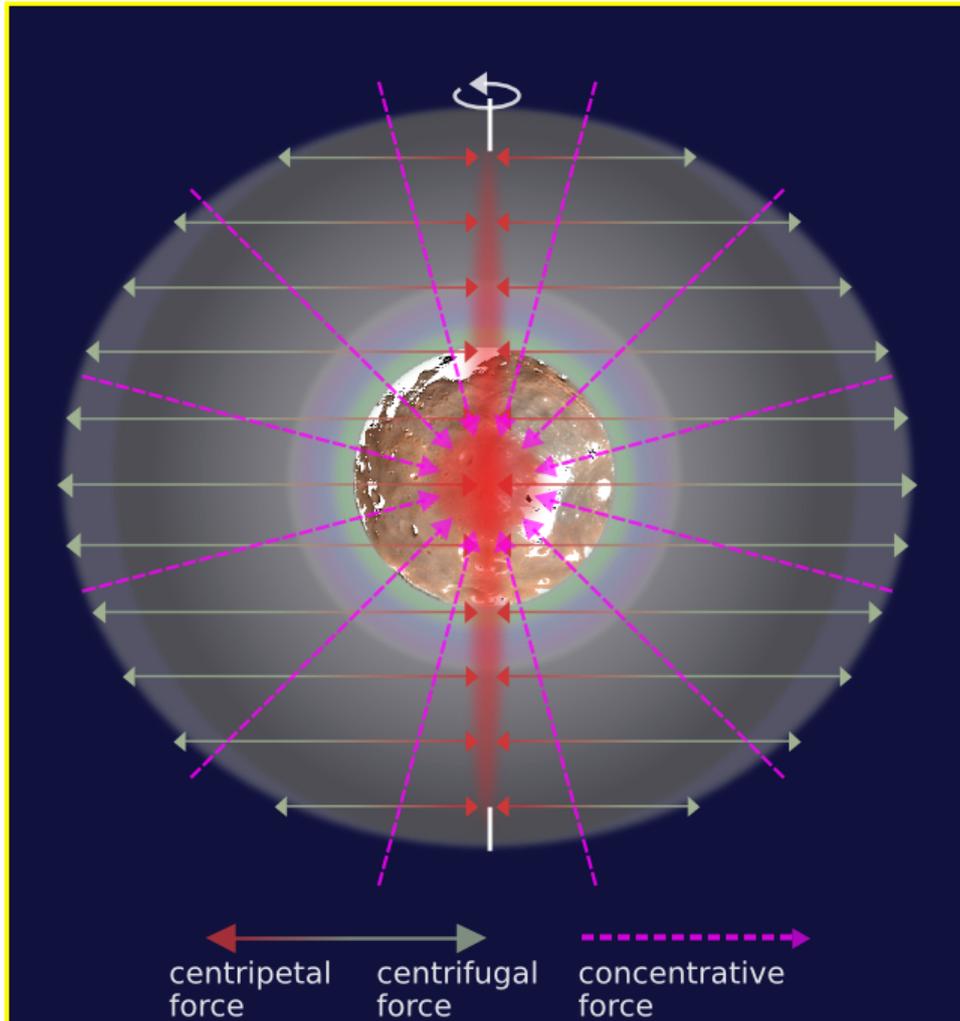


Figure 5: Nomad Planet and It's Gravity

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## 4 Rotation

Centripetal/centrifugal force would be created by the rotation of the planet. Centripetal  
80 force will squeeze the planet along the axis. Centrifugal force, on the other hand, is a es-  
caping force against the gravity from rotating axis. It is a constant acceleration against the  
gravity. The planet could bulge out at equator into an oblate spheroid, as depicted in Fig-  
ure 6.



85 Figure 6: The centripetal and centrifugal force generated by the rotation

## 5 Compressed Core

This centralized compression of gravity can be considered slow implosion. Elements could  
be liquidized. With energy released from the compression, new elements can be forged.

With the help of centripetal-centrifugal force. It could compress the core into an ellip-  
90 soid form. Melted elements may align and crystallize into a ellipsoid shape along the axis

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running from north to south.

## 6 Electromagnetism

In additional to the concentrative collision force, electromagnetic force will cumulate with the growth of the planet as well. Since electromagnetic force is the fundamental force of atoms, it will not weaken nor disappear. Weak magnetic field, detectable of not, by dipole magnetic detector does not mean weak magnetic force. I believe it is accumulated proportionally to the increased mass.

Unlike the gravity force concentrating toward the core with consistent directions, a unified magnetic field is not guaranteed. Complex magnetic fields would be difficult to detect. However, it will be detected by atoms and particles. Nevertheless, the planet would be enclosed in a magnetosphere binding the top layer particles to the planet. A primary magnetic field may align and form uniform dipoles, as depicted in Figure 7.

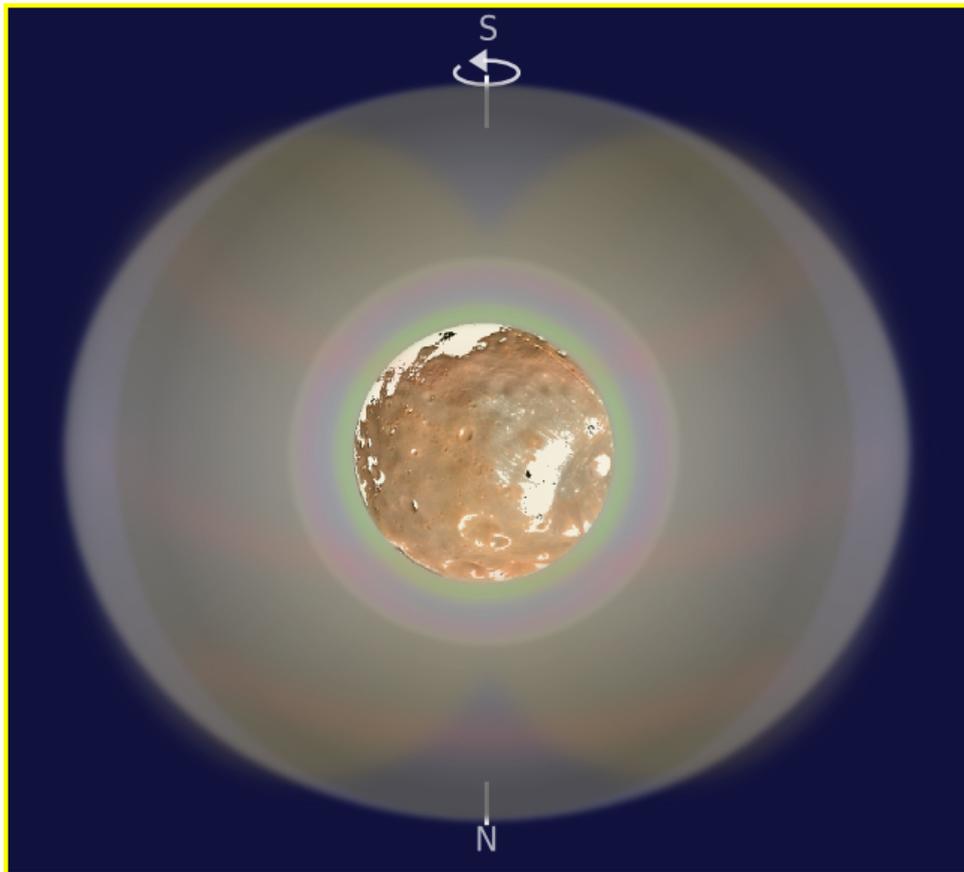
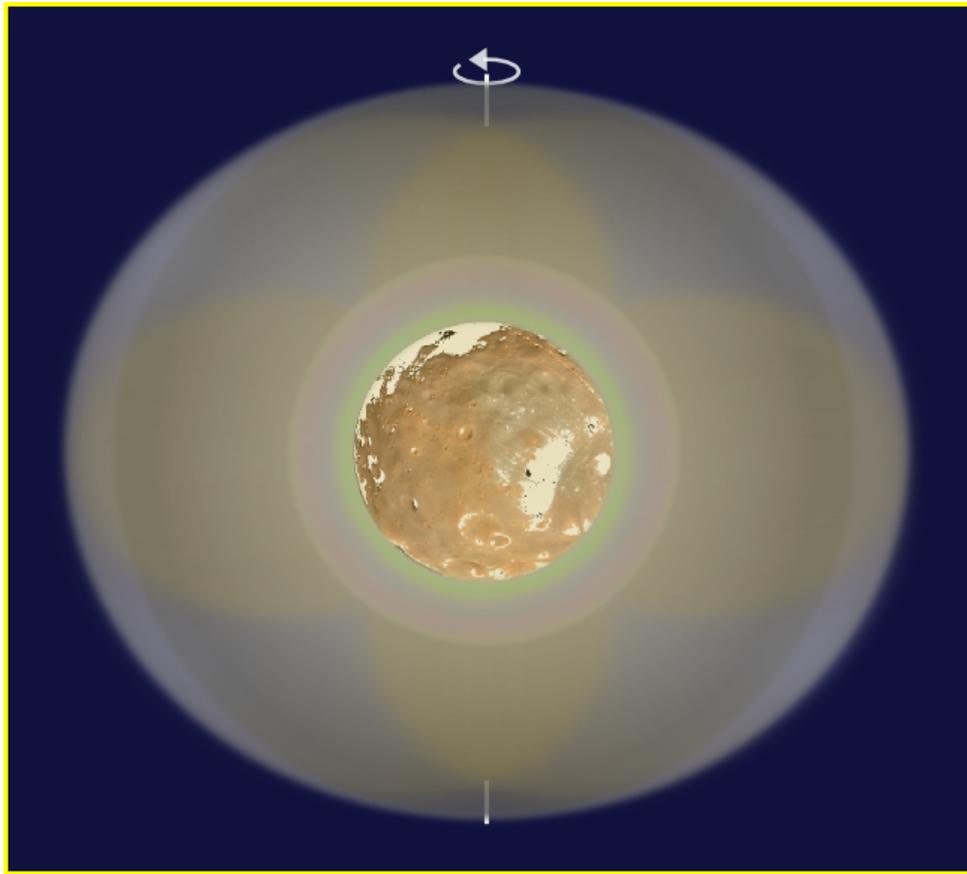


Figure 7: Uniform Electromagnetic Fields

In other cases, there could be lack of primary electromagnetic field but complex web of bent or twisted magnetic-fields, as depicted in Figure 8. However, I believe the total

---

magnetic force of an object should not be weaker than an object with aligned magnetic fields of equal mass. Analogy to a magnetic shielded speaker with weak magnetic detection from outside is due to bent magnetic-field, but not weaker total magnetic force.



110

Figure 8: No Uniform Electromagnetic Fields

## 7 Bubble in Space

When this planet has grown to this stage, all elements, particle, plasma, air, liquid, and solid of this planet are trapped and protected in a bubble of kinetic and electromagnetic force fields. The bubble surface is determined by the interaction of the planet with its environment, or absolute complement, as depicted in Figure 9.

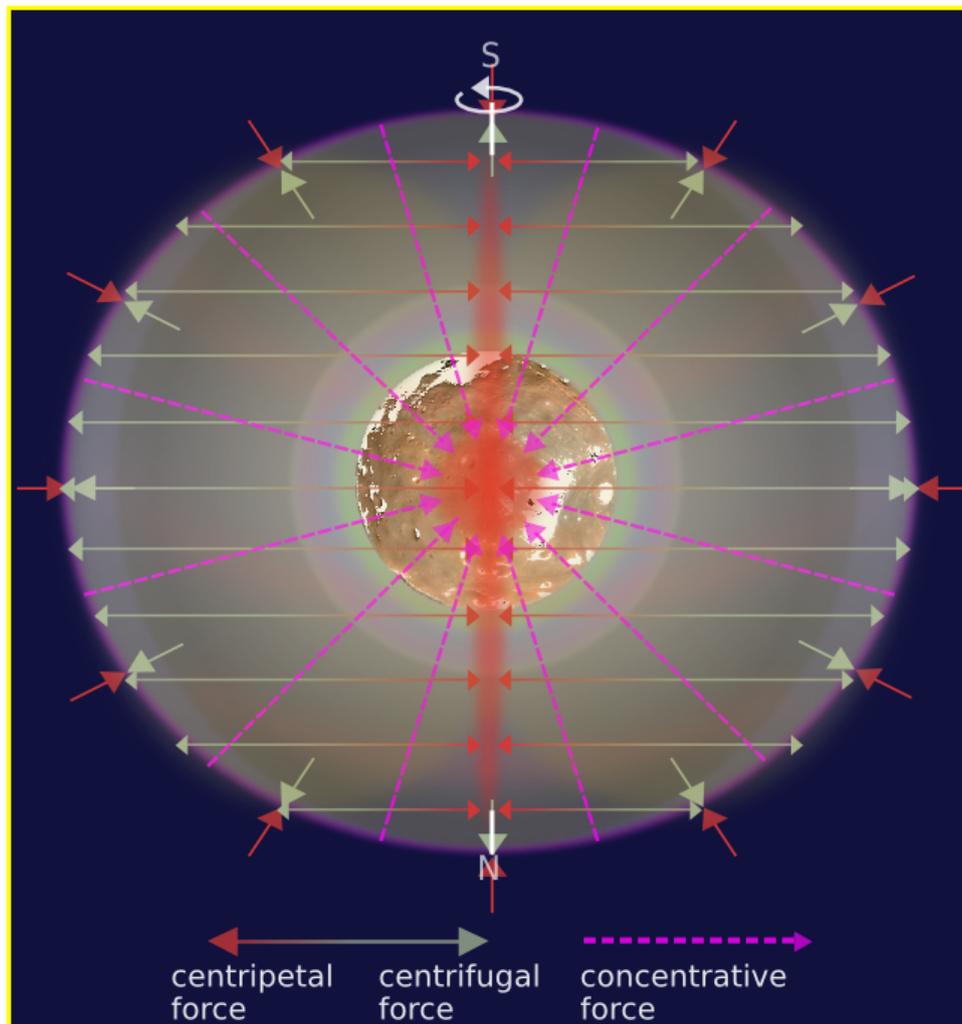
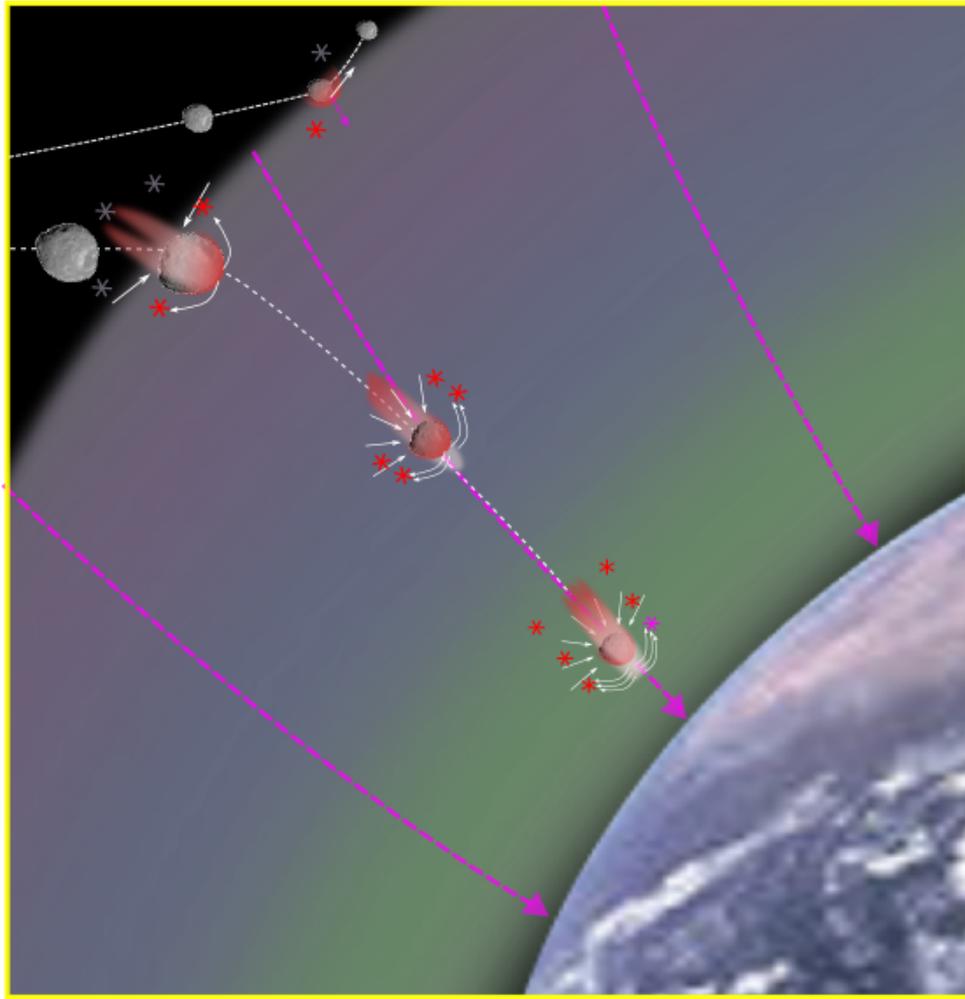


Figure 9: Bubble of Force Field

It is surrounded by concentric layers of different density, *e.g.*, magnetosphere, ionosphere, atmosphere, crust, mantle, and core, made of particles, gases, liquid, and solid. This bubble force field is easily observable in our daily life when matter is bound, *e.g.* air bubbles or oil droplets in water, gas bubbles in molten metal, mercury blobs, hurricane, tornado as well as the Earth and stars. A boundary is formed to separate this bubble from its environment. All layers of particles will follow the planet and carry the basic intrinsic angular momentum, *i.e.* concentrative force, as well as rotating and translating force of the planet.

## 8 Growth and Development

Being a dominating object in vicinity, it will continue to grow as long as there are elements available. Figure 10 depicts the encounter of a planet with incoming rocks.



130

Figure 10: Growing Planet

Any contact with object from outside will alter the composition and force field of the planet. There would be exchange of mass and momentum. Captive masses of different density, from lighter than air to denser than liquid, are distributed to layers of the planet.

135 Compression and friction acting on a meteor is a physical and chemical process of separating and forging elements. In the end, new elements are added. Meanwhile, the momentum is incorporated into gravity, rotation, and translation. The planet would provide protection for all joined components. Keeping matter and energy in place, it would allow complex interactions to continuing. Physical and chemical processes are protected and governed by

140 the planet. It could continue to grow and develop as well as recycling and forging complex elements. The fate of this planet is determined by it's environment, or the rest of the universe which is the absolute complement of the planet.

---

## 9 Summary

I don't believe there is anything mysterious about gravity. It has no difference from contact  
145 force in our daily life. It provides the protected environment for matter to gather and build  
structures. It is not weaker than other forces. Objects moved to minimum contact field, *i.e.*  
above atmosphere, would lost the strength of their concentrative potential and experience  
micro gravity or weightlessness. However, gravity center is the strongest force field of the  
planet. It is a focal point of force from all directions. With the most intensive mass and  
150 energy, it can be the foundry of recycling and forging elements. And, under the protect of  
the planet and it's gravity, *the magic of life!*

Natural and mankind build structures from ground up. Out of fundamental elements  
to complex living organisms. I believe this is the principle of creation and growth. Large  
structure is the collection of sub-structures. Higher level structure can not exist unless it's  
155 components were made. The gathering builds a body and force of coalition. The Kepler  
Mission of NASA have discovered many "nomad" planets floating through the galaxy with  
no star like our Sun to anchor them[7]. I also believe we will continue to discover more  
planets. It would multiply outnumber stars with the improvement of our night vision.

Nevertheless, the same process can build varieties. Say a region has high concentration  
160 of oxygen and hydrogen. Rubbing of the molecules could create static electricity and ignites  
the reactions. The outcome could be a sphere of water with oxygen and hydrogen bubbles  
trapped in. It could be frozen into ice when the reaction slows down if it's environment  
is colder. On the other hand, it could collide with a dusty rock and trapped in. Isn't it  
wonderful the varieties and multiplicities of planet would continue to surprise and excite  
165 us?

---

## 10 Appendix - Paradoxical Interpretations of Gravity

Note: The detail of the studies are under:

*The Refutation of Gravitational Attraction* [4], and

*Spacetime Curvature Paradox Essay* [3].

### 170 10.1 Gravity Is Not Attraction



Figure 11: [Hammer Feather Drop by David Scott, Apollo 15](#)



Figure 12: [Falling body experiment, Brian Cox visits NASA's vacuum chamber - Human Universe Episode 4 Preview - BBC Two](#)

175 All falling body experiments show one overlooked fact,

*gravitational acceleration is independent of mass, shape, size, surface, and distance.*

Contrarily,

*attracting acceleration is dependent on mass, shape, size, surface, and distance.*

Therefore,

***"gravity is not attraction."***

180

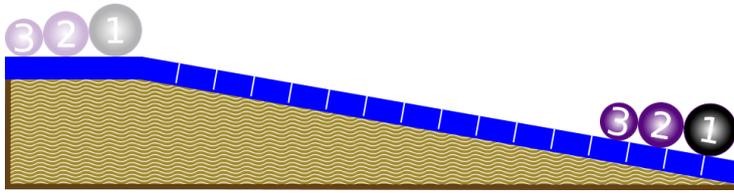


Figure 13: Slow Motion Gravity Shown By Inclined Plane



Figure 14: Slow Motion Attraction Shown By Magnetic Putty, YouTube user: Steve Bartlett

The experiments in vacuum chamber tell more than just gravity. Since space is inside chamber. It also shows the truth,

*the vacuum and space do not disrupt the fall,*

and reverse truth,

*the ball and feather (both mass) and the motion of mass do not disturb vacuum and space.*

Note that it is gravity powers the fall. It also shows the truth,

*gravity can act on mass, but vacuum and space can not be disturbed by gravity.*

In light of this, what really are *gravitational wave* and *geodetic effect*?

## 10.2 Inescapable Collision of Attraction

Most of us have played or watched magnets in action. Unless they are tied down or guided, they always collide under the magnetic force. Even there is repelling force, magnets will rotate and attract. It shows the fact that, within the range of attraction force, collision is inescapable on frictionless surface.

This inescapable collision of attraction in free space is also demonstrated by Don Pettit's water droplets and needle experiment in International Space Station (ISS)[6]. A screen shot is depicted in Figure 15.

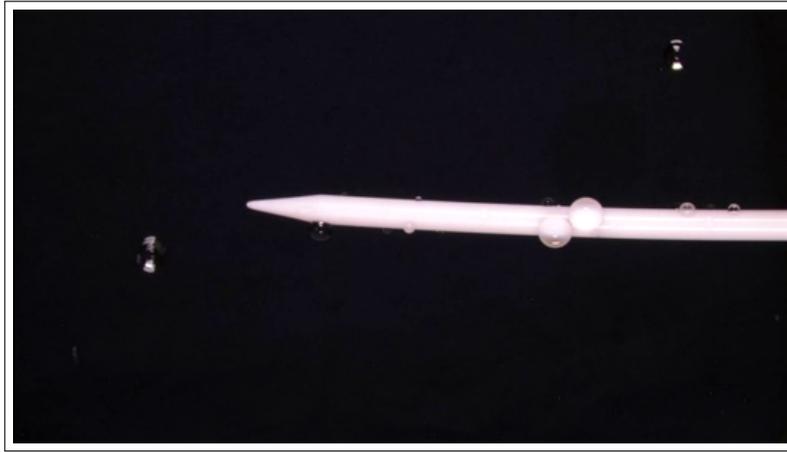


Figure 15: Inescapable Collision of Attraction Shown By Don Pettit's Water Droplets and Needle Experiment, ISS.

200 The attraction of static electricity attracts droplets within it's reach, it shows:

- bent trajectory,
- acceleration on coming, deceleration on going, and
- escape or collide.

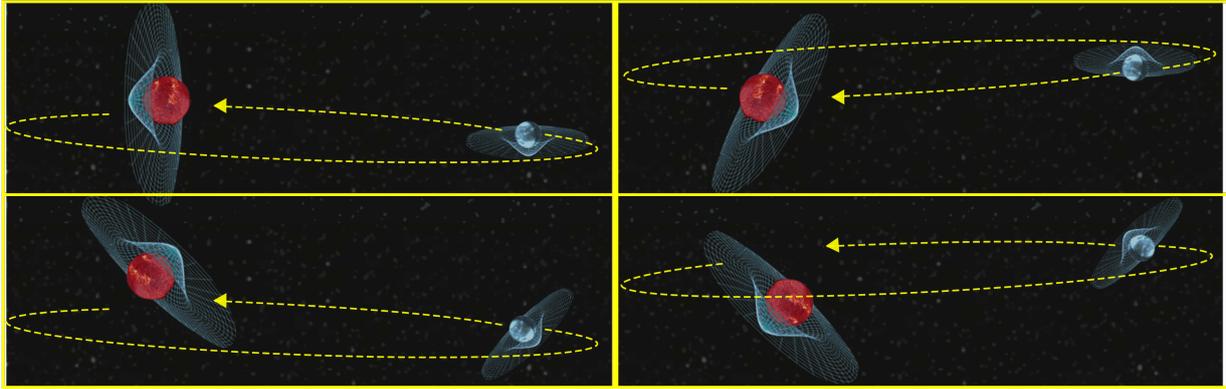
205 However, there is no single droplet can maintain it's orbit around the needle. Orbiting droplets would accelerating in a logarithmic spiral and collide. If droplets didn't escape, it is impossible to keep them orbiting around the needle unless there is perfectly balanced count-acting force. Do you believe it is possible to make water droplets remained orbiting around the needle?

210 The truth is, within the range of attraction; The trajectory of a droplet will be bent toward the center of attraction. A droplet would escape if it's momentum could overcome the attraction (escape velocity), and it is not on the collision trajectory. Otherwise, it would continue to spiral toward the needle. The result can only be collision for orbiting droplets when there is attraction force at work. Nevertheless, if droplets didn't escape, it is impossible to keep them orbiting around the needle unless there is perfectly balanced count-acting force.

215 Attraction is a force of gathering or collision. It has to behave the same whether it is gravitational, magnetic, or static, isn't it? We would be able to observe the same actions playing out in Solar System if it was held together by attraction force. Since the Sun has dominating mass; All objects in Solar System are within the reach of the Sun. And, they are weightlessly floating in frictionless space. Only a small change in trajectory would be

220 amplified exponentially by the leverage of repeating orbital duration and distance. Unless there is an equal opposing force to secure all objects on their orbits, wouldn't they have to spiral down toward the Sun, if there was constant mutual attraction?

### 10.3 Gravity by Spacetime Curvature Paradox



225 Figure 16: Infinite Curvature Vectors of Spacetime Paradox

As depicted in Figure 16, I don't see how two-dimensional conception of Geodetic Effect can work in three-dimensional space. In space, it could have infinite vectors of up, down, left, right, and everything in between, be carried along with an orbiting body, if such vector existed. There is no way of predicting which gravity vector will take effect. Different bodies would not fall in identical rate in gravity field if there were curvature of spacetime. If it is geodetic effect keeping Earth and Moon from spiraling toward the Sun, wouldn't curvature of spacetime be significant and detectable during solar and lunar eclipses? Hot solar atmosphere could create observable mirage during solar eclipse. However, light bending of hot tin-roof is completely irrelevant to space or time.

235 To me, gravity does not bend space. Falling body experiments had shown that vacuum and space can not be disturbed by gravity. Gravity can act on clock (mass), but never time. Besides, space and time can not go together. Space has natural existence, time has not but an artificial measurement. Space is absolutely recyclable, but time can never be recycled. And, space is fundamental, it is independent of mass, energy, and everything else. Due to its paradoxes, neither geodetic effect can explain the formation and operation of star system, nor the gravity force in our daily life and falling body experiments.

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