Impact Cosmology

Moment 0.00001— Lumpy Mist
Earth's lithosphere its hard shell under the oceans is only about 50km thick. If we compare this to Earth's radius of 6,371 we realize that our planet is around 99% hot fluid and 1% hard shell. And if we look around the universe, all the larger bodies we see are apparently either fully fluid, or if they have a shell, it is probably a thin shell, like that of our planet in the late universe.

So the "Big Bang" was probably a huge explosion of a super hot fluid. What do we know about huge explosions in fluids? dispersal... mist... lots of tiny droplets. Recall the water "cloud from the big explosion in Beirut... but in the early universe, we have gravity almost instantly drawing the mist back into clumps

So the universe probably begans as a super hot mist... with a great deal of matter "atomized" or at least turned to fine mist with lumps or "clumps". Then, almost instantly, as the material is exploding outward, the hot fluid matter clumps draw together into larger and larger clumps/ball as everything is flying away from the origin. And let's call clumping force as "Lateral Gravity", because it is lateral to the Big Bang's concentric explosion vector/direction outward.

Gravity zillions of times higher
Time zillions of times faster

At the start of the Big Bang, when the universe was much smaller, the secondary gravity between the ejected material must have been zillions of times higher due to the smaller distances involved. And because of this extreme secondary gravity, the rate/speed that matter drew into clumps was zillions of times higher as well. So with respect to the gravitational, kinetic and orbital dynamics of stars and galaxies, time occurred zillions of times faster at the beginning. Thus we see a "short spike" on a power curve (see below) ... And in today's old and low-gravity universe, we are on the "long tail", and interactions (gravitational events) barely happen at all any more.

<Graph of power curve>

Gravitational events happened faster
In the beginning, there was near infinite activity in a vastly smaller region. Gravity was zillions of times stronger, and collisions between clumps occurred zillions of times faster. Perhaps 99% of all collisions occurred in the first 1% of time. Or perhaps it was 96% of all collisions occurring in the first 3% of time.

The vacuum of space
Many types of gravitational events only happened when the universe was small and dense. For example, the initial clumping of stars and gravitational sweeping clean of space into a near total vacuum. This seems to have happened when the universe was much smaller and gravitational forces were much higher.

Consolidation
The universe began with more small bodies. Today there are fewer but larger bodies because of consolidation. And most of these collisions happened at the beginning, when space was smaller and time was running much faster with regard to "star impact consolidation", or "kinetic time", or whatever we call it.

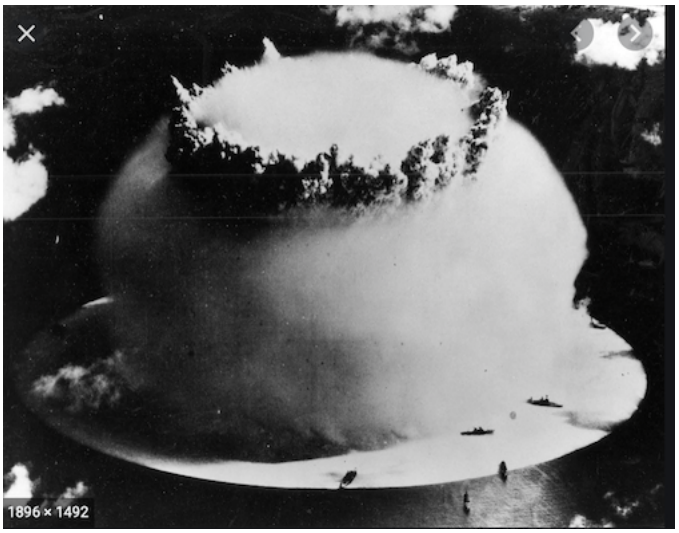
Primary force
The bang energy is the primary force. The lateral gravity is several orders of magnitude weaker in comparison.

Stuff zipping everywhere
In the beginning of the universe, there were zillions of fast moving objects going in every direction, striking each other and causing gravitational eddies

and chain reactions as they zipped around. Now the short violent spike of the initial universe has faded to become a very long and remarkably peaceful tail.

The big and powerful got bigger
The high mass blobs got bigger, because they had more (lateral) gravity to pull in other objects from space. The more mass they had, the more mass they could draw in, and collide with, and agglomerated with. So for star formation (like so many other things), the big got bigger.

As well, stars in orbit around other stars tended to get bigger than solitary stars because these stars moved more. And as they moved, they swept-up and merged with objects from a larger part of space: More than if they just stood still relative to the other stuff being hurled away from the point of the origin. The clumps that orbited other clumps as part of a big group, say as a proto-galaxy became biggest. These clumps swept immense regions of space, causing much soaking up material and merging.



Bikini Atol nuclear test. Note the tiny ships.

Mist consolidated and re-congealed
Essentially the mist from the bang explosion immediately consolidated into droplets, and then into larger spherical bodies. Although there were probably lumps to begin with. And again, everything was probably created and set in motion in the first 1% or maybe 10% of time and then has just expanded for the remaining 99% or maybe 90% of time. And we are not assuming much here. it is just typical power curve timing.

Earth's gas pressure
The gas pressure within our planet speaks of just how shortly after the "big bang" the matter clumped-up. There seems no other way to account for the gas pressure entrained within our planet's fluid center — and presumably most other large bodies in space that have an atmosphere.
At the seafloor rift, Earth's outgassing pressure is over 250 atmospheres, the pressure of the water at that depth. The gas trapped within our planet must be at a higher pressure that 250 atmospheres, or it would have a hard time escaping.

The Sun supposedly has 333,000 times the mass of Earth. So its trapped gas is doubtless at a much higher pressure. What would this gas look like when it bubbles/leaks out of the sun? Wouldn't it look and behave just like a solar flare when it comes out?

Thus solar flares seem to be the same process as volcanic activity on earth — pressurized gas froth escaping and bringing material from the super-hot fluid center of the molten space orb. The main difference is that on the surface of the sun, there is no rock, and the erupted material undergoes fusion once it reaches the surface. Clearly solar flares are functionally the same thing as volcanos. And clearly the sun contains super high pressure gas that erupts great distances into space, overcoming the sun's immense gravity.

We all agree your ideas are crazy.
But are they crazy enough?
—Niels Bohr

They tend to explode on impact
The high pressure gas trapped within liquid stars and planets tends to explode, when disturbed too much. This especially with larger higher pressure space bodies and faster collisions.

Soap bubbles in space
People don't appreciate how much like soap bubbles stars and planets are. Both soap bubbles and "space balls" (stars/planets) are round and both are subject to catastrophic explosions on impact.

Why presume stability?
Stars and planets tend explode if they hit a large-enough or fast-enough object. And when they hit a smaller object, they tend to produce giant volcanos, and lose their gas, and their atmosphere, like Mars,

which seems to have been punched through twice and almost entirely de-gassed.

When they get hit by small objects, the result might only be "punch-ins", but either might produce hotspots like we see at Hawaii and Sao Tome. And there are two of these on earth, so we have to wonder if it was one small punch through. Like a bullet shot through an empty warehouse.

Hawaii and Sao Tome are places where Earth's lithosphere leaks extreme amounts of volcanic gas and heat. These are places far from a plate margin with their own outgassing source, and their own bubbling-out point. In both volcanic island chains, we know which way the lithosphere moved. In both places, this created a chain of ever more dormant volcanos where the lithosphere moved over the hot spot below.

So it is easy to imagine that these sub-lithosphere hot-spots were produced by a collision, or two. And it is obvious that they are still bubbling out a long-tail amount of gas and hot magma millions of years later, like oozing wounds that never heal.

Just imagine if these were bigger like on Mars and there were two of them. Then Earth might have de-gassed just like Mars.

Just what Earth needed for life
This partial degassing was evidentially just what our planet needed. Perhaps it enabled our planet to skip ahead some eons on the outgassing curve — To get to an outgassing point and atmospheric pressure where multi-cellular life could thrive.

Big fast meteors are to planets
What bullets are to people
Every single meteor that can get through the lithosphere has the potential to kill a planet dead as happened with Mars. Animals bleed blood, planets bleed gas, and then they both die.

Earth's orbital velocity is 110,000 kph. So if Earth hit a nearly stationary object, it would hit at 110,000 kph. And many meteors are made of Iron, so these are giant 110,000 kph cannon balls, giant cannon balls. And if they are big-enough and hit directly-enough, they might punch right through the lithosphere like an anti-tank round.

The three sister planets
We should presume that Venus, Earth and Mars all came from the same source given the unmistakable CO2 fingerprint in their atmospheres, for all have 96% CO2 in their atmospheres ±0.5%. In Earth, fresh volcanic dry air is 96% CO2.

Venus' atmospheric pressure
is similar to Earth's seafloor rift
Earth's seafloor rift has gas pressures above 250-Earth atmospheres. Venus' atmospheric pressure is 93-Earth atmospheres. also, Venus has 81.5% of Earth's mass.

Gravity and pressure
Gravity obviously causes extreme pressures to develop at the center of large fluid bodies. On earth, we see pressures in excess of 250 atmospheres at the Seafloor rift. Now the sun has a mass that is 333,000 times that of the earth. So the sun might have gas pressures approaching (250 x 333,000) = 83-million. This seems to be the force driving solar flare material so far above the intense gravity of the sun.

Perhaps we can use the height of solar flares to estimate gas pressures, and the return curve to estimate the sun's gravity. Also, is the sun brighter on the antarctic side of the plane of the solar system? Is there a secondary gravity effect on the sun's out gassing like on earth?

Outgassing is another power curve
On all bodies in space, outgassing seems to start out with a high initial rate, a "short spike", followed by a "long tail" that trails off for eons. It is worth pondering that this was probably the case with both our star and our planet.

So the Sun began with continuous solar flares, many times more solar flares. And these flares were much bigger, and they went further out into space. And the sun burned much hotter. And back on earth, our planet had more outgassing and a thicker atmosphere. So here we imagine Earth beginning with a more Venus-like atmosphere than it has today. Here we also imagine a short-spike where Earth that was much hotter. As well, in the entire early universe, every star and every planet tended to be hotter... and again, this all cooled along a power curve.

Outgassing powers planets
Outgassing makes planets "live" in 4 important ways:
1/Geological activity: Outgassing powers seafloor spreading along Earth's 80,000 km long seafloor rift system. Outgassing also drives continental drift, earthquakes, and indeed all volcanism and active geology.
2/ It provides carbon food: On our planet, volcanic gas comes out as 95.5% CO2. As life forms are constantly accreting carbon back to the planet (i.e. the Dover cliffs) there is a chronic shortage of CO2 in the environment. Thus outgassing is needed to replenish the carbon that sustains “carbon-based” life.
3/ It replenishes the gas lost to space and chemical reactions.
4/ It provides most of Earth's surface warmth: The average temperature of the north pole is -3°C. So from -273°C (absolute zero) to -3°C is 270°C. Then the sun is only getting the planet warmer by maybe 38°C more at the equator, and maybe 17°C more in colder places. So the sun is making the planet only about 12% warmer in the topics, and about 6% warmer at higher latitudes.

Carbon based life
Life is very efficient at using the carbon dioxide gas Earth constantly out-gasses. This comes out as ~96% CO2, and then due to life, it drops to a 400-ppm trace, or 0.04%. So new volcanic air has 2,400 times more CO2 in it, and then due to the presence of life, the amount of CO2 in the atmosphere drops by 2,399. In other words, for every 2,400 parts that come out, 2,399 get used by carbon based life. So life is extremely efficient at using up all nearly all the CO2, leaving only a trace amount, a long tail trace amount.

Consider how the atmospheres of both Mars and Venus have atmospheres that are ~96% CO2. This tells us that there is no carbon hungry life in either place. Otherwise the life would cause CO2 to accrete like on earth. Then the atmosphere wouldn't be 96% CO2.

Venus seems to be too hot for even extremophiles. And there doesn't seem to be enough atmosphere on Mars to sustain life. Also, the idea that Venus is too hot for life is a valuable point for further reckoning. Seafloor vents are not too hot, or too high pressure, but the surface of Venus is too much for them.

Time ago
1/ The sun burned hotter.
2/ The Earth orbited further away from the sun.
3/ The Earth had a thicker atmosphere.
All three are obviously true to some extent.

The vacuum of space is immensely insulating
40km of rock is also immensely insulating
This is how the center of our planet can still be hot after eons.

The spray from exploding planets and stars
1/ Earth is 99% liquid and 1% solid shell.
2/ Many smaller asteroids are shaped like liquid spray frozen in a gravity-free environment.

Alderaan dirt-clod debris
When the mythical planet Alderaan from the Star Wars Sci-fi film exploded — The result should have been a spray of hot glowing molten liquid. Instead it was dirt clods. Small, frozen-solid, geologically inert, no-atmosphere, dead worlds produce dirt clod debris, but most objects still have molten cores that to produce hot spray.

How fast do magma balls develop a hard skin?
Does it take eons, or does a thin skin develop almost instantly on contact with icy space? Think of the kids who foolishly touch their tongues to cold metal in winter and get stuck because their tongue freezes on contact. Surely fresh planets instantly develop a skin of some thickness.

The hard skin formation power curve
The thickness and hardness a space body's skin is another thing that works according to a power curve. On day one, the planet's skin thickened more than on any day following.Thus the formation of a hard skin is rapid at first and then tails off to millimeters per eon. Here is why so many asteroids have such fluid shapes and have not balled up. It is because if they are small enough, they freeze almost immediately, and before they can ball up. Also, we should be able to use the scale of fluid vs. round asteroids to estimate the rate of the freezing in space.

Star collisions

6-million kilometers per hour
The star known as S5-HVS1 is moving at over 6-million kph. Super fast stars like this speak of how fast colliding stars and galaxies can be moving towards each other. The speed of light is 1.08 billion km/hour, so this star is moving at about 0.5% of the speed of light in today's old and slow universe.

Mercury's average orbital velocity
It is 175,000km/hour, or 107,000miles/hour.

What would colliding stars moving at 250,000 km/hour look like?
Wouldn't they look like a supernova? Why do we believe in supernovas? Why do we think that stars explode all by themselves? And by what magic of chemistry and physics does a lone star — a thing steadily cooling, degassing, and depleting in energy. ...How does this star suddenly become unstable and detonate? And remember that cooling and degassing are happening on a power curve, with a short spike at first, and then a long tail. How do things get from long tail cooling to a star exploding?

No. This image of a lone star exploding all by itself in a supernova is hard to believe. And the true mechanism is much more likely to be a collision. One star slams into another star that is probably going 175,000 to 6-million km/hour… or faster.

Canopis, the 2nd brightest star in the sky
In 1843 this 3-star system experienced a "Supernova" and became a 2-star system, with one of the stars becoming the 2nd brightest star in the sky. It was an event witnessed by much of the world and bizarrely called the "Great Eruption", (see end note) Some points:
1/ The explosion was asymmetrical and the debris field (The Homunculus Nebula) is sort of hourglass or dumbbell shaped. This shape looks like a head-on star collision — like two conical debris fields. It does not look at all like a single star explosion, the popularly accepted cause of supernovas.
2/ Canopis (Eta Carinae) became the second brightest star in the sky. Is this because the explosion is still tailing off in early brightness? See skyandtelescope.org article.
3/ What is different about the emissions of Canopis? For these are the emissions of a recently reformed star.
4/ Canopis clearly ate the 3rd star.
Endnote: The "Great Eruption" is a name that hid the eruption of the Tambora volcano in 1815, which was 28 years earlier.

The source of planetary kinetic/orbital energy
This tends to be from the other star, which was going maybe 250,000 Km/hour. In other words, the other star's motion relative to our star is where the orbital energy of the planets came from. As well, the material of the planets seems to be from the other star. Surely there was no billiard-ball-in-the-middle phenomenon, and surely the planets are parts of the nemesis star that just kept going through the other star, our sun... which was also entirely fluid. So funny law of nature... all planets are probably not of the star they orbit.

When stars collide
If there is only a de-gassing event, the material probably re-congeals quickly. If there is a star-scale hydrogen-bomb explosion most of the material might not re-congeal.

Gravity how long?
Matter moving at 5-million kph is 1000 time less influenced by the gravity it passes than matter moving at 5,000 kph. It is important to realize that there are objects moving so fast that they are not much subject to the gravity they encounter along the way.

Imagining a star collision
The two stars hit each other at maybe 200,000 to 10,000,000 Km/hour. In some cases the smaller star explodes before impact. In other cases the two stars remain intact until they collide. In other cases (in most cases in the old universe) the stars don't collide immediately, but instead spiral together as binary stars until one explodes.Thus in most star collisions, there is eventually a sudden release and and fusion of immense amounts of hydrogen star fuel, just like with a supernova.

When the universe was young and neighboring stars closer, the effects of star collisions might have resulted in "knock-on" collisions and even perhaps a waver of chain reactions. However, now we live in an old and diffused universe, with slower moving stars — stars with less impact energy. So now even collisions are rare.

Nebular accretion
This is the name of the theory that says that the solar system formed from a cloud of dust. Where did the cloud of dust come from? From a star collision right? Was it dust or hot mist? How long did the central stuff exist at hot mist before it started re-congealing?

Star collision debris
has a variety of speeds
1/ The slowest debris with little angular momentum simply falls back into the star immediately.
2/ The debris that is a bit faster spirals down a bit before reaching its event horizon. Then it falls into the sun immediately.
3/ The debris going a bit faster spirals for a very long time before falling into the sun.
4/ The debris going a bit faster finds equilibrium between orbital velocity and gravity. This is what the solar system is today. This is the "goldilocks" scenario for the most extraordinarily long lived collision ejecta.
5/ The debris going a bit faster spirals out for a very long time before being lost to space.
6/ The debris going a bit faster spirals out for a short time before being lost to space.
7/ The debris going a bit faster was simply lost to space immediately after the collision.

Way down on the long tail is where we are today in our solar system. Today we live in a solar system that contains only very old objects with exceptionally well balanced orbits — where the object's angular momentum balances almost perfectly with the stars gravity on that object.

But orbits aren't really a balance...
They are like a ball bearing spun fast around an empty swimming pool bottom. Round and round they go, but the drain (and slope) that makes them go round… that always... always... always eventually consumes the orbiting object. And the orbits are always shrinking little by little. And as they shrink, the ball goes a bit faster and gravity translates into more lateral movement around the polar gravity source. But all orbits are always decaying, and the solar system was bigger billions of years ago, and this was conveniently while the sun burned hotter.

Debris quantity
This is another thing that was probably a power curve. There was a whole lot of debris in the first moments. Most of this was either reabsorbed or spun-off rapidly and then over time there was less and less, and a long tail-off.

The speed window for stars to form planets with long-term stable orbits
It is just like with our communications satellites, there is a speed window. The orbiting objects have to have the correct orbital velocity to stay in orbit... too slow and the satellite will not say up, too fast and the object will spin out of orbit.

If the colliding stars hit too fast, the planets they cause will be too fast to stay in orbit. And if the colliding stars are too slow, the planets they cause will be too slow to survive for long in orbit.

Chain reaction impacts?
Early in the life of the universe, there were many huge objects flying around that frequently struck stars. In fact, we imagine a crowded initial universe that probably experienced at least one chain reaction wave of star impacts. Thus we see that the early universe was by far the most likely time for a collision that forms planets. Maybe the first 2% of time had 98% of all collisions.

After collision re-congealing
After a collision, the speeds and distances involved can make the re-congealing a thing that unfolds over hours with slow moving objects, or eons with fast objects. And with objects moving faster than X, the re-congealing/ re-clumping doesn't mostly occur at all.

Also, if the impact was slow and the congealing was fast, the highly insulating vacuum of space apparently does not dissipate much heat and gas, judging from Canopus. On the other hand, the fastest, biggest, and most violent star-collisions are "open" longest and probably dissipate the most heat due to the immense volumes and re-congealing time needed.

Re-clumping of magnets
After stars collide, all the matter close to a main mass clumps-up in moments — a bit like magnets snapping together.

Gravity vs. gas pressure
The gravity is surely much stronger than the gas pressure. But the gravity is eternal, and the gas pressure is a "momentary" thing involving a temporary one-time explosion. Then gravity again takes over, almost immediately on a "geological" or "astronomical" time scale. Then the gravity draws the bodies back into clumps. Then apparently, it can take billions of years for the long tail of the reabsorption of the collision debris to become fully complete.

Stars colliding/exploding in the early universe
Again a power curve is a good model. There was a short spike in stars exploding in the early universe, and now we are on the long tail with very little activity of this sort.

Today's old and inert universe
Today's old universe could best be characterized as inert and on the long tail of the gravity interaction curve. This is mostly from the immense size that the universe has grown-to. But stars are also dimmer and give off less and less heat. Nowadays, we have almost no heat or gravitational interaction in comparison to the beginning of the universe. Nowadays, the universe is just different. It is much more gravitationally, thermally, and kinetically inert due to the immense distances between bodies.

Grasping the emptiness of space
If our sun were a millimeter across, the solar system excluding Pluto would be 42 meters across. And the nearest star would be 17 kilometers away. Except for these astronomically minuscule objects, interstellar space in today's old universe is almost a total void. And here we are talking about the crowded space within a galaxy, and not the intergalactic voids.

Silly accretion theories
Stars and other space objects don't FORM from clouds of debris, they instantly RE-FORM from clouds of still hot debris. And this begins immediately after a collision due to gravity. This while the stuff that is thrown further out obviously can last for billions of years in orbit either as a re-congealed planet or as a non-congealed dust cloud blocking a star's light.

Nebular accretion
This is the name of the theory that says that the solar system formed from a cloud of dust.
1/ How come there is practically no residual dust from that cloud in our solar system unless gravity was stronger back then?
2/ How can space be such a pure vacuum now if it was such a sandstorm then?
3/ How long was the cloud phase? Was it very long, or was it almost instantaneous?
4/ What about the hot center of our planet? how did that get hot? Or was it always hot? It must be still-hot, right? And the planet must have re-congealed very soon after it was created, right? The Nebular accretion theory says that it began as cold dust that was then made hot by pressure/friction/pressure.

The orbital debris clouds must have been short-lived
Planets do form out of clouds of debris orbiting a star. However these clouds do not last for billions of years. The clouds only seem to last for an “astronomical instant”.

Collision lumps. Why Earth’s center is still hot and pressurized
Ok, so we start with two hot stars colliding — then, we end up as a planet that is 99% hot. So did the cloud of dust phase involve total cooling, or total outgassing? If not, it was probably lumpy, or perhaps just super quick.

Also, the center of the sun is supposed to be around 27-million°K, while the center of the Earth is single digits thousands. So the Sun is thousands of times hotter than the Earth. Did that cooling happen after earth re-congealed, or before?

So the cloud of dust phase was probably a cloud of hot fluid mist phase, and this phase was probably so short-lived that there wasn't time for the material to entirely cool or de-gas before it re-congealed. There was still a great deal of cooling and depressurizing, from the Sun's temperature and pressure, to that of the earth's center. But there was not a total loss of heat as the nebular accretion theory seems to imply.

The official scientific consensus, as stated by the corrupt googling mechanism
"The universe is 14 billion years old and the solar system 6 billion years old."

STATIC ASTRONOMY = the old astronomy of regular orbits and the rare collisions of the long tail. This is the astronomy where stars exist largely without interacting with other stars.
DYNAMIC ASTRONOMY = the new astronomy where most change has been historically due to early collisions and eventual re-absorption of the ejected material.

There is no such thing
as a precisely balanced orbit
After stars collide, there is debris going in every direction. The stuff that is going too slow spirals into the star. The stuff that is going too fast spins out into space. After billions of years, very little material is left — and all that is left is in quite perfectly balanced orbits.

Perfect orbits
Do you know why Earth's orbit is so perfectly balanced? It is because our planet is still here. Because it hasn't been swallowed by the sun, or spun off into space. But re-absorption eventually happens to ALL orbiting orbs over time, no matter how perfect their orbit.

It all eventually gets re-absorbed or spun off
At the galactic level, the solar-system level, and the planetary moon level: All orbital systems eventually re-absorb or spin off all their satellites, for there is no perfect balance, only the extreme perfection of the final 1:10,000 of material that remains in perfect balance after some billions of years.

99.86% of matter in stars
The sun is about 746 times the mass of all the planets combined. So in the only star we have reliable information on, only about 0.14% of the solar system's mass is "dark matter" that is not in the star, but orbiting it. Also, in the only star we have reliable information on, only about 0.14% of the star's mass was not reabsorbed or spun-off after billions of years.

The remaining long tail
The sun is about 746 times the mass of all the planets combined. So the remaining planets should be viewed as the long tail remaining after billions of years... Although 90% of the action surely took place in the first year or perhaps millennia.

Galaxies & stars as drains
It must be similar physics, the water spinning down the sink drain, and the bodies orbiting in space before going down the drain into a star. Surely these are a similar process. Surely this is how the universe consolidates, at least locally near the giant consolidation stars at the centers of galaxies.

CTD = circling the drain
Every star in every galaxy,
Every planet in every solar system, and
Every moon orbiting every planet
Essentially everything in pace is literally circling the drain on the eventual pathway to re-absorption by whatever object it orbits. It is all quite a bit like a ball bearing "orbiting" the drain in a dry swimming pool. It just goes on for billions of years.

Spacetime is both wrong and right
The image of someone standing on a trampoline as an accurate representation of the way universal attraction works — that is accurate. It's just the spacetime part that seems bogus. This is because there is nothing in space, not fabric, nothing at all. To me, what is called spacetime is merely the reduced effect of matter on other matter due to distance diluting whatever effect is attracting the matter.

4.3-billion orbits
That is about how many times the Earth seems to have orbited the sun.

How much is Earth's orbit decaying?
All planets eventually fall into the star they orbit. We should quantify this for the planets as it is such an important thing for our understanding of the cosmos. Surely we can figure out a formula and orbital decay constant. How much does our planet's orbital path shrink per year?

Survivors
The space balls we see today are all the survivors on the long tail of the power curve. They are like a fast spun coin, or a maglev spinning top. The survivors we see today are exceptionally balanced and long "spinning" or orbiting.

A sun growing brighter?
1/ It is widely accepted that the solar system is shrinking over time. If we assume that the sun is growing hotter, what happens to planetary

temperatures in ever smaller orbits? They go up don't they? And this is clearly in conflict with both intuition and the fossil record.
2/ It makes more sense that the sun is dimming as it runs of fuel, and this is mostly countered by the shrinkage of planetary orbits.
3/ To be clear, the idea of stars growing brighter over time is nonsense. It is one of those theoretical ideas with no evidence, no basis in reality, and no logic to it.

The sun dims while orbits shrink
Over time, the sun experiences lower outgassing and thus it dims. Meanwhile the orbits of the planets also shrink. The dimming of the sun was on a power curve and had a short peak. The orbital shrinkage of the planets was much more straight line. Thus, the outer planets might have all had a brief early period where they were suitable for life like the inner planets today.

Possible explanations
for Earth's long term cooling trend
The fossil record shows how polar Antarctica was one of the first places to sustain life, and also was one of the first places to grow too cold for life. Here are some possible reasons for this:
1/ Earth has less trapped gas, or lower gas pressure, so there is less outgassing and less heat leaking out from the planet's center.
2/ Earth's shell is thickening and becoming less permeable to this trapped gas.
3/ The forces of secondary gravity flex our planet's skin less due to an expanding universe.
4/ The sun is having less outgassing and is cooler.
5/ Volcanoes on earth are growing more and more polluting as they age.
6/ All bodies cool over time.
7/ It is hard to say which is the main cause.

A solar system many times size
It is not hard to imagine that the solar system was once many times larger than it currently is. Maybe what we see today is the long tail, the last bit of floating bath bubble foam spinning down the bathtub drain.

Stars, planets, and moons
Stars, planets and moons are 3-classes of space object. In general, planets tend to come from star collisions, and moons tend to come from planet collisions. Although some planets in stellar orbits also seem to come from collisions of larger planets, especially those planets in strangely oriented and extreme orbits (like Mercury and Pluto). • • • So most objects tend to come from collisions of the class of object that they orbit. In other words, colliding galaxies tend to produce stars (we will get to this below), and colliding stars tend to form planets, and not so much moons around those planets, and colliding planets tend to form moons and rings mostly.

Stars, the only source of planet matter
In a universe of clumps (stars) and emptiness, the only source of planet matter must be stars, or more precisely collisions between stars. And if the planets are going to remain in existence for any length of time, it is probably collisions between binary stars that become solitary stars. This is because the gravitational dynamics of multi-star systems rapidly consume and re-absorb all the smaller clumps (planets) in orbit around them.

Planets mean that the star they orbit suffered a collision.

Moons mean that the solar system they are in suffered a planetary collision.

Orbital discs
We see orbital discs everywhere in the universe, and at all three levels recursively. The things spinning around things spinning around things… Why are they all in disc forms rather than spheres?
1/ PLANETS: Saturn has an orbital disc, and Jupiter has an orbital disc made mostly of moons.
2/ STARS: Our Sun has an orbital disc.
3/ GALAXIES: Galaxies, are orbital discs.

Why is material orbiting in discs everywhere?
Surely there is something fundamental going on here if we see this disc form repeated at all three recursive eddy-levels in the universe.

The shape of the universe
Never mind the shape of the edge of the universe. That is probably unknowable. The real shape of the universe, the form that matter takes everywhere is the orbital disc. This is the shape that matter takes in all three orbital levels in the cosmos: Galaxies, star systems, and planetary rings and moons. This is the most important shape in the universe. And

surely a cosmology must explain why matter is always orbiting in a disc.

Thin disc — Fat disc
Saturn's discs are razor thin because they are so low-mass and diffused that the material is are gravitationally un-reactive. Also, perhaps because of a slow impact. If the rings are dense and gravitationally reactive, or if there was a fast impact, they will tend to form more of a flattish donut form — the shape of most galaxies.

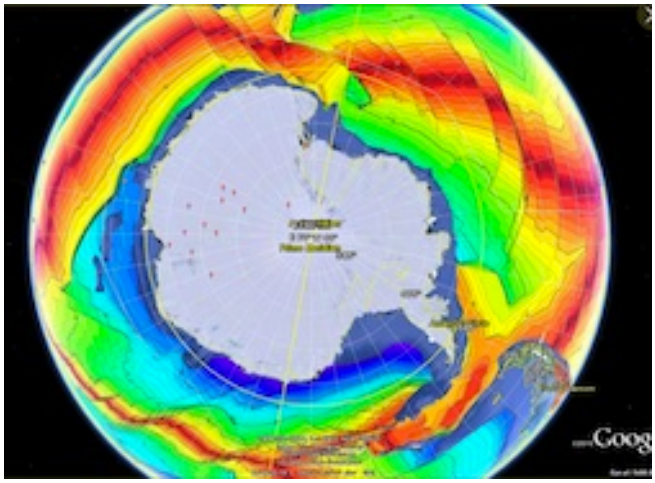
The discs of Saturn
These are estimated to be between 10-meters and 1-km thick. Due to the low mass of this material, there is little gravity and little movement away from the plane of the disc.

The rings of Jupiter, Saturn, Uranus & Neptune
All four of these planets have narrow rings. So this is not a rare phenomenon. In fact, rings seem to occur around all of the planets of the outer solar system, where the planets are less subject to solar secondary gravity.

Variance from the orbital plane
If we ignore Mercury and Pluto which appear to have arrived after the formation of the solar system, the variance of the planets from the plane of the ecliptic, or orbital disc/plane is remarkably narrow:

Venus	2.2%
Earth	1.6%
Mars	1.7%
Jupiter	0.3%
Saturn	0.9%
Uranus	1.0%
Neptune	0.7%

Secondary gravity on Earth
I discuss this in greater detail elsewhere, but we can see the effects of secondary gravity on Earth. The plane of the ecliptic is at ~23.5° to Earth's rotation axis. This corresponds to the Antarctic circle (The yellow line that contains Antarctica). So as Earth hardened, there was this flexing point, this rift that followed the Arctic circle. Here is where a large part of the planet's magma froth bubbled up.
Now if we look at the seafloor ridge in the ring around Antarctica depicted above, it still forms more or less a ring around the antarctic circle. The rift has drifted outward considerably. However, the deep channels with the inside of the planet apparently remain. And these "warm hole" channels seem to have apparently outlived the flexing… although they have drifted north considerably. Also look at the shape of the seafloor rift system. It is a ring around Antarctica with three legs of varying lengths going up the 3 main oceans. So it is fundamentally secondary gravity that has shaped the land masses and oceans on earth.



But what I am getting at—what is important here—is that we see two huge aspects of reality that both point in exactly the same direction in space. So we should start with the assumption that they have the same cause based on otherwise freak directional alignment.

Jupiter isn't the gravitational leader
Reasons for not believing this
1/ The variance in the orbital planes of the various planets is neither close, nor a function of distance from Jupiter.
2/ Where are the gravity leaders for the rings of Jupiter, Saturn, Uranus and Neptune?
3/ How do you get such thin rings as those of Saturn with a gravity leader?
4/ What produced the seafloor rift on Earth?

Orbital discs tell of impacts
They tell of two objects re-congealing and flying off from one another. The secondary gravity (G2) of the other object pulls away all the orbiting debris that is not in an orbit that is perpendicular to G2. This results in two parallel axial planes essentially pointed at each other.

Orbital discs & secondary gravity
Imagine that two stars (Star-1 & Star-2) have just collided at say 250,000 km/hour (50% faster than Mercury's orbital velocity) producing lots of orbital debris, lots of stuff orbiting in every direction. How does the gravity of a still nearby Star-2 affect the far-out and barely held orbital debris of Star-1? (Remember we are starting with "spherical orbits", not orbital discs.)

Won't the outer orbitals of Star-1 with orbits roughly headed towards Star-2 get a boost from the gravity of Star-2? And won't these objects tend to develop increasingly elliptical orbits in the direction of Star-2? And won't the non perpendicular orbits tend to head straight out towards Star-2?

So if there is a secondary gravity source of the appropriate speed after a collision, it will tend to pull outer material out of their orbits around the other star it just collided with. And this is especially so for orbital objects that are already sort of going in that direction. These orbits see both orbital tilting and orbital elongation towards the secondary gravity source, until one day they are simply sucked away by the other star. However, the material in orbits perpendicular to the source of secondary gravity will not get tilted. And this what orbital planes are. They are the small amount of material not sucked way by G2 because their motion just happened to be perpendicular to G2's vector.

Which sort of gravity are we looking at
Primary gravity creates an orbit. Secondary gravity creates an orbital disc. Tertiary gravity creates ellipse shapes for orbital discs.

The star that got away
1/ Again, the early gravity of the impact star is what causes solar systems to exist in planes/discs. It does this by pulling away all the bodies in orbits that were not perpendicular to its gravity. So wherever we see an orbital disc/plane, we're looking at the footprints/handiwork of a star that got away.
2/ The star that got away "G2" pulled off perhaps 98% of the orbital material in our solar system, just as our star did the same with G2's orbital material. And all this happened over just a few years/orbits.
3/ Perhaps we can find orbital discs still pointed at each other like the halves of the same clam shell.

Full speed in: Limp away
Mercury is moving at 172,332km/hour around the sun. So let's say G2 was moving at say 500,000km/hour. And let's say that the core of G2 limped off at 250,000km. Thus G2 would have reached Neptune's distance from the sun (4,480,000,000km) in 18,000 hours, or 2-years... which probably gets just about all the orbitals that are not in an orbit perpendicular to its gravity.
2/ The immense secondary gravity in the first moments and indeed "years" after the collision tends to cause all of the non-perpendicular orbital debris to be pulled away by the other star. It also has an accelerated clearing effect on the finer dust.

The plane of the ecliptic
This is the confusing official name for the plane of our solar system. "Plane of the solar system" is a much more intuitive term that doesn't squander cognitive overhead.

Above is an image Canopis, the 2nd brightest star in the sky. This looks like the remaining dust cloud from a collision. And the double cone shape is exactly what we would expect of a debris field from two stars colliding. It also looks like the sort of lingering cloud of dust we see after larger manmade explosions on earth.

This is some compelling imagery that supernovas are from star collisions. For here is the site of a famous supernova, and also here is clearly the hourglass shape we would expect of a star collision.

And here is what two solar system in their infancy might look like — if the right gravitation conditions are present (i.e. two surviving stars instead of one). But it is not hard to imagine two parallel planes of the ecliptic forming from this impact process.

A photo of a baby solar system
With Canopis, there appears to be only one star surviving. If there were two stars, the two clouds would have been pulled away more by secondary gravity. Also with Canopis we see the way a collision looks after 205-years.

Canopis is not so dusty or black
Here is a small star collision so slow that resulted in rapid re-consolidation. But look a how much volcanic dust and gas it produced. It is not hard to imagine that faster-moving, bigger, higher pressure, and perhaps obliquely moving stars produce much thicker and darker clouds of volcanic ash.

Canopis is a thing of the late universe
The collision was slow and this leads to what was mostly a slow merger, more than a high-speed, hit-and-run, or hit and spray collision like we might see in the early universe.

Canopis: image of a stellar re-collision
Note the way gravity is hollowing out of the far cloud... drawing the slow material back in. Also, note the reddish color of the light in the outer cloud.

The planets and their orbital velocities
Give this a glance & skip to the next section
(mm = million miles)
Mercury (43mm out) has 1.6X Earth's orbital velocity.
Venus (67mm out) has 1.17X Earth's orbital velocity.
Earth (93mm out) has 1.0X Earth's orbital velocity.
Mars (142mm out) has 0.8X Earth's orbital velocity.
Jupiter (483mm out) has 0.43X Earth's orbital velocity.
Saturn (889mm out) has 0.32X Earth's orbital velocity.
Uranus (1,784mm out) has 0.23X Earth's orbital velocity.
Neptune (2,780mm out) has 0.18X Earth's orbital velocity.

Orbital speeds of the planets graph here

Swirling discs
1/ Mercury's orbital velocity is 9 times faster than Neptune's. Here plainly, in an undeniable way, time is occurring faster near the star. We can explain this in any way we want, but Mercury IS moving at 9 times the velocity of Neptune.

2/ There is less than one order of magnitude difference in speed between the fastest and slowest planet Neptune = 12,146mph **-vs-** Mercury = 107,082-mph. So it isn't hard to think of long-term solar systems as coming from impacts of a particular speed range, mostly slower than say 300,000 mph. All the material going faster than 300,000-mph can't stay in orbit for a long time, no matter how perfectly its orbit is.
3/ There must be a bell curve distribution for impact speeds that tend to produce planets. It would not be surprising if early impacts tended to not produce planets because the objects were generally going to fast, and also because gravitational forces where much higher. Therefore in the early universe the bell curve for viable long term planet creation must have been much narrower, and over time the conditions for planetary formation became more favorable and the curve flattened.
4/ Stars form of sort of celestial drain with a remarkably shallow slope at their periphery. Also, stellar gravity is another thing that follows a power curve (see illustration above). This outer shallowness surely must be a critical aspect of why orbits can "remain stable" or slowly decay over billions of years. At the same time, the time decay is goes short-spike as we move closer to the star. There orbital time is much more compressed and critical.
5/ The inner planet's have the fastest decaying orbits, while the outer planets have orbits that decay slowest. Mercury's orbit is decaying the fastest of all planets, Neptune has the slowest. Pluto isn't an original planet in our orbital disc. Pluto is on its own orbital decay timeline.

99.86% of matter is in the sun
In our own mature solar system, the sun is about 746 times the mass of all the planets combined. So for the only star we have reliable, accurate, and detailed information on, only about 0.14% of the solar system's mass is "dark matter" that is not in the star, but orbiting it in a thin disc mostly. In only star we have reliable information on, only about 0.14% of the star's mass was not reabsorbed or spun-off after billions of years.

Saturn's rings
1/ These are what is left of a very thick early debris field that was mostly pulled away by secondary gravity — and probably from the same object and collision that formed the rings in the first place.

2/ Rings are cross sections of debris fields in their varieties. Fortunately we have 5 rings in our solar system that show us what orbital debris/dust fields look like.
3/ If we dial up the thickness of these rings might they obscure a star?
4/ We can use these slices to estimate cloud mass and the size of the object that caused the ring/cloud. Then we can create a formula for equating cloud/ring thickness with object size and speed.
5/ Saturn's thick atmosphere may have come from the same place its rings did. Perhaps the stuff close-in was unaffected by secondary gravity, and this is what we call Saturn's atmosphere. And perhaps the stuff further out in orbit was unaffected if it was in a perpendicular orbit. Perhaps that is what caused the rings.

https://www.youtube.com/watch?v=5l2tR2smeHY

The inner and outer moons of Jupiter

They are not co planar like the inner moons. This makes it look like they are late arrivals, perhaps from the destruction of the planet where the asteroid belt was. The inner moons are what remains from an earlier collision, a collision that produced an orbital disc, the random orientation of the outer moons implies that the outer moons were picked up later.

Pluto, the Oort cloud, and further out

These objects are not co-planar like the inner planets. This makes it look like they arrived at a later time, after the impact that formed the plane of the solar system.

It is notable that none of these Oort objects has an orbit that is more than 40° out of the plane of the solar system. Perhaps once they reach 40-45°, they are crossing the inflection point and time goes vertical for objects being picked off by secondary gravity.

Stars exploding

A great many stars contain immense amounts of gas under extreme pressure due to their intense gravity. Because of this gas pressure (that we clearly see in solar flares), stars tend to explode when sufficiently disturbed. They essentially pop like soap bubbles when they hit a big enough, and/or fast enough moving object.

So let's say a smaller star is spiraling into a much larger star and the small star pops, and explodes. And there is a sudden massive release or “outgassing”. This is the same hydrogen fusion "fuel" that powers the sun. What is the result? Isn’t it a massive star-scale H-bomb explosion — a super nova.

Black holes

Let’s say the explosions occur with material that is in orbit around a big star. So some of this material is blown straight into the star, and some straight out, and some in other directions. But much of the stuff, that the explosion blows outward away from the big star winds up coming back in orbit for a second life before ultimate absorption. And all this stuff is mostly like a mist, or like volcanic ash that apparently can get quite thick and opaque to light an other forms of energy transmissions, like perhaps gravity (although to a lesser extent than light).

Because galaxy stars (the stars at the centers of galaxies)… because galaxy stars eat lots of little stars, they frequently get a super thick cloud around them, made up of what is essentially volcanic ash. And this is why the biggest stars are normally dark.

Exploding stars & black holes

Practically every star eaten by a galaxy's central black hole spirals in, for all the stars are spiraling anyway. And the closer to the center the stars are the faster they spiral. Thus, as the smaller "meal" stars gets closer, they accelerate, and angular momentum increases with gravity. However, at some distance, as the smaller star approaches the larger star, the gravity starts to spike around the larger star, and this is felt more by the near and forward side of the meal star. So the meal star is pulled and sheered until it ruptures and explodes while in orbit. Then much of this particulate material finds a higher where it remains for eons, adding to the cloud of debris in orbit around most dark stars.

Why big stars tend to be dark

Maybe the reason why the highest mass objects tend to be without light is simply that they are more likely to have eaten another star recently.

What is a dark star?

It is a star that "recently" collided with another body and the collision made enough debris to block, or in many cases, only diffuse the light emitted.

Saturn's rings in 3D
Imagine what Saturn would look like with a 3D debris field instead of only the 2D rings that are left. Now imagine that the particles are thicker from the mass of the star and finer due to the force of the explosion. That is what the dust cloud around a black hole is like.

Saturn's rings are conveniently micro-tomed
Rings are how we learn about collision clouds. For in each planet's rings are the remains, a slice (microtome) of the collision cloud. So rings are important things to study and send probes to. Rings are much more important than dead and de-gassed planets like Mars.

Tabby's star
The random dimming and brightening this star is hard to explain without dust shells. However it is easily explained with a couple irregular and incomplete dust shells orbiting the star at different speeds.

Barnard 68
It looks like an impossibly large debris field, probably a debris field is in the foreground, like corneal detachment "floaters" in one's eye fluid.

What's the red shift from?
A/ It is from the universe is expanding, and this is causing the oldest light to look a bit redder due to a sort of doppler effect.
B/ Space smog, the tiny amount of "dark matter" dust remaining in space is reddening and dimming light from great distances. We see particulates reddening starlight on Earth. And also reddening distant views on Earth. And these are the same colors we see in red-shifted stars. Why should we suppose that there is a different cause in deep space?
C/ Are we sure about the red/blue oscillation with binary stars? A doppler effect in smog? Or maybe there are two ways to get reddened light. Either things are moving away from each other, or the is dust in between that is slowing down the light.

Dark matter is:
A/ Impossible to estimate because it is dark.
B/ Easy to estimate because it filters distant starlight and makes it red.
C/ Mostly a thing of the debris shells that cause stars to be dark.

Black hole soup – I don't believe in it
Think of the super dense atomic collapse material with no electrons that is supposed to exist in giant stars. I think this is not even theoretical. I think it is science fiction like transporter beams and hyperdrives:
1/ It is entirely theoretical and there is no physical evidence of this stuff. It is impossible to dis-prove.
2/ It doesn't support or connect to any other ideas, and it doesn't help explain anything.
3/ It is sensational and fanciful and squanders the attention.
4/ It is a favorite subject of the corrupt media.

Red giant vs. black hole
Maybe with red stars, the volcanic ash is as thick as Mexico City smog, and with the black stars, it is like the day-to-night volcanic ash after Mt. Pinatubo erupted.

Event horizon
The true nature of a black hole's event horizon is not nearly as sensational as the Hollywood sci-fi make it out to be. Just imagine a meteorite falling into the thick dusty atmosphere of Venus. The point where the clouds of Venus obscure the meteorite is the "event horizon".

Passing through a black hole in science fiction
When objects fall into black stars, they don't come out the other side in some other part of the universe. They either go splat on the surface, or they explode before they reach the surface and perhaps contribute to the cloud of volcanic ash that is already obscuring the light of the dark star. Is there any physical evidence at all of worm holes to other places or dimensions? Clearly this idea is science fiction garbage promoted to the point where lots of people think it is a real thing. What a shameful thing that we allow this sort of rubbish to be presented as anything but fantasy media.

Passing through a black hole in reality
This happens when a star disappears for a while behind some opaque part of space, only to emerge in another rather nearby part of the universe. That is the true meaning of passing through a black hole.

Temperature is probably the best proxy for time, but gravity also works

The 27-million°K temperature at the center of the Sun is temperature and perhaps time going "vertical" within our star. With bigger stars the temperature is higher and the area is bigger. With black holes, there is a cloud of debris that traps the star's heat and perhaps also some of the star's gravity. This perhaps pushes the vertical time wall (the true event horizon) further out from the star. And this "event horizon" is probably roughly where the other stars have exploded, at the dust shell.

Red shift dust

1/ The minuscule amount of intergalactic red haze is probably the best way to estimate the quantity of "dark matter" in the universe. The vacuum of space still has a tiny bit of long tail "volcanic ash" and that is what causes the red shift.

2/ What do we observe in our own solar system area? Don't we see a total vacuum with so little dust that pressurized space travel is possible? And sure, immediately after a star/planet collision, there's a whole lot of dust in orbit.

3/ Surely we must use the conditions we observe in nearby space as the model for all space.
Why would there be piles of dark matter in other parts of the universe, but not in our own?

4/ Some stars are surrounded by thick black clouds of volcanic ash and some others are only hazy and

red-shifted like sunsets get on earth.

5/ Here in this red shift dust, we see how completely binary was the clumping of matter in the formation of the early universe. There is matter and there is absolute vacuum, and there is almost nothing in-between.

6/ We clearly see how all galaxies and all solar systems are collapsing everywhere. No longer do we assume that the universe is expanding at the same time.

Are red giants actually black holes that have cleared mostly

Perhaps the redness is from lingering haze, and these are now hazy stars that at an earlier date were black.

Where are the dark red & brown stars?

It appears that we can find stars with a slight reddening, and a slight dimming, and then the filtration goes vertical like an "L-shaped" power curve, at least with respect to visibility from the other side of the galaxy/universe. This is not consistent with motion slowing light. But it is consistent with volcanic ash filtered light.

Where are the "Dim Holes"

If the intense gravity overpowers and delays the light, where is the continuum? Where is the red shift for medium-mass objects that only delay the light a little bit? Where are the dim black holes?

X-rays

X-rays are famous for passing though matter, like dust clouds. The cloud of dust theory is more compatible with how black holes emit X-rays and no light.

Pulvology = the study of dust
Stellar pulvology = the study of stardust, a blid
Climate pulvology = the study of how volcanic dust affects climate
Respiratory pulvology = the study of how dust affects breathing
Toxic pulvology = the study of toxic particulates
Urban pulvology = the study of how to reduce urban particulates, and the practice of keeping particulates below acceptable levels.
Organic pulvology = the study of how organics like molds and pollens affect humans
All of these areas obviously need more attention.

The shapes of galaxies

1/ NGC1300 above looks like a collision between galaxies, that has been greatly re-absorbed and greatly cleared at its center, with the outer parts still orbiting the great mass at its center.

2/ The pinwheels speak of galaxies colliding and their debris fields.

Ok, maybe the intense gravity of a giant star is an all or nothing thing. Or maybe when gravity reaches a point, the light gets bent into orbit, or diffused by gravity so it don't make it across the universe for us to see. This is how I imagine gravity overpowering light. I think it is more believable than the current vagueness that surrounds this widely accepted idea that is entirely theoretical. Also, I want to say, I am still skeptical of the idea simply because there is a much more down to earth explanation that involves no "super-physics".

Stars and outgassing
Why doesn't all the hydrogen in our sun come out at once and explode? Maybe the hydrogen is trapped under a shell like on earth, a shell that slows the rate of outgassing. From here, we start seeing stars like giant, super-high-pressure planets that outgas much like we see on Earth.

Here we imagine that due to their immense size, density and pressures, stars hold orders of magnitude more gas by volume than planets. But the hydrogen doesn't undergo fusion until it gets to the surface for some reason. Why is that?

So solar flares start looking like a form of outgassing, like on Earth. Immensely pressurized gas bubbles come out of a star — and as the bubbles come out, they undergo fusion. The resulting heat helping to propel the material high into the sun's "atmosphere."

Sunspots
Sunspots are a super hot froth of heavier material bubbled up from down deep. They erupt up onto the sun's surface, where they remain while they are hot. But when they cool, they sink back down because they are more dense.

They are a material that doesn't glow as much as the hydrogen. This material skittles around on the sun's surface like water on a hot skillet. Eventually the material cools to the surface temperature and then thanks to its higher density they sink it sinks into the surface fluid. Sunspots are connected with periods of higher heat because they come from deep within the sun and bring heat up.

Faculae
These are bright areas on the surface of the Sun that precede sunspots. This is the hot gaseous material from very deep. This comes up first and just fires up the sun's surface even more than usual. So the sun glows brighter here.

What powers the sun
Nothing. It is just still hot
Outgassing and surface fusion certainly add to the heat of a star, as we see from times of high solar flare activity on our Sun. But mostly stars are not powered at all. Mostly it seems think they are just still hot from their formation.

Is star heat mostly from fusion?
Are we sure of this? I mean, maybe the fusion is a secondary thing that happens to outgassing where heat and pressure are high enough.

Are stars entirely made of gas?
The outer part is certainly gas, like many planets. But skeptical me, I need a reason to believe that there is not a solid part deep inside of the sun.

Why think of stars as different?
Aside from mass (which could be distorted) there is no evidence to suppose that the centers of stars are composed of different material than planets. Why should we suppose that stars are composed entirely of gasses?

Is the sun really getting brighter?
This is another counter-intuitive belief that is entirely without any physical evidence. Why would a body that is constantly radiating/ sending huge amounts of energy into space be growing brighter? I need a good reason to believe this counterintuitive headline-grabbing idea.

The binary star period
1/ Binary stars are not eternal, and like spinning tops, they eventually wind down and merge/collide/ explode.
2/ Certainly these can't sustain orbital material in a delicate balance like single star systems can.
3/ Maybe they never collide but but spin ever closer until they congeal like two drops of water. Maybe this is one normal way for stars to "collide".

4/ It seems more likely that one or both stars will lose gas containment, and there will be a sudden outgassing and then a star-scale hydrogen bomb explosion... a supernova.

Homeless binary stars
There are apparently over 30 binary stars flying through intergalactic space. Gravity has drawn these stars together with substantial force/speed into a collision or merger that has not yet happened. Instead, the sum of their vector energy sort of “Y’ed off” into space.

Pulsars
With pulsars, the light waves pulse from milliseconds to maybe as long as every 3 seconds, but not more. So it is probably not the spinning-ice-skater-drawing-her-arm-in effect, even with a speed up of time. For why not also have 1-minute pulsars and 10 hour pulsars too? Where is the continuum we should expect from ice-skater explanation?

On the other hand this rate of cycle does look rather like something playing on the waves. And if this is so, then pretty much everything ever written about pulsars can be thrown out, because there is not a single thing about the pulsation that is actually about the star itself. It is all about how the star’s energy is distorted on its way to us. Also, if pulsars are pulsing fast due to the ice skater effect, then they should be accelerating over the decades. Is this happening? Is there pulsar acceleration?

3-stars diameter rotating at 10X/ second
The average star is 1.4-million miles in diameter. So a pair of stars in a binary system that are a star apart will be 4.2-million km end to end. And if they are rotating at 100X per second, that comes to 420-million miles per second, or about 2,260 times the speed of light for the material on the outsides of the stars.

https://arstechnica.com/science/2014/03/6-billion-year-old-quasar-spinning-nearly-as-fast-as-physically-possible/

Galaxies

Do galaxies have dark fringes?
Galaxies are certainly brighter in their centers. Perhaps we only see the brightest star light from the biggest stars at the centers of other galaxies. Perhaps galaxies extend great distances into space with ever smaller, and ever dimmer stars until we reach dark planet and the then sub-planet scale objects instead of stars. So defining galactic edges for the purpose of aging the universe becomes more difficult.

Where are the spherical galaxies?
How come galaxies all exist as discs?
This certainly makes it seem that galaxies are formed of impacts.

Why are galactic discs so fat?
1/ When high gravity stars are densely packed, they become more interactive and this lead to greater disc entropy.
2/ The impact star was moving so fast that its effects were brief and incomplete.
3/ The giant impact produced a great deal of gravitational turbulence that outlasted the short peak in secondary gravity.

Galaxy stars

Ponder a Galaxy Star
It is a whole galaxy condensed into one giant ball or bomb of hot fluid under immense pressure. For eons, these are black because they are surrounded by the "volcanic ash" of all the zillions of stars they have eaten. Then eventually, the ash clears and the stars grow bright again.

Galaxy Stars spin fast
First the big bang's energy was converted into orbital energy. Then the orbital energy was imparted to the galaxy star as rotational energy. Galaxy stars are dead in space, but they are spinning at incredible speeds. They are also about as hot, and full of energy and time, as we would expect from the source of a Big Bang's energy.

The end of the universe loops to the beginning
1/ We can see where we are today as a universe full of galactic discs, suggesting impacts between galaxy scale objects.
2/ It is hard to deny that there is a giant "galactic consolidation star", or "galaxy star”, a giant “black hole” at the centers of most galaxies.
3/ It is also hard to deny that all stars in all galaxies will eventually spin down into the galactic consolidation star they orbit, given enough time

4/ So we can see where the galaxy has been, and where it is heading — towards eventual consolidation as a giant black galaxy-star. The part that is conjecture is that these galaxy-stars seem to be colliding in pairs, and exploding and producing the familiar form of the galactic disc we see everywhere in the Universe. It isn't much that is conjecture.

The phases of the universe
Phase-1: Big bang
Phase-2: Field of debris.
Phase-3: The field of debris contracts on itself and forms into galaxies, with a galaxy star at the center of each galaxy. In this stage, the galaxy star is generally black due to all the dust and debris around it. And because there is this constant absorbing of stars, the galaxy star normally stays black from right after the galaxy's formation until long after the last orbiting stars are all absorbed.
Phase-4: The stars all re-absorbed by the galaxy star. But the cloud of dust from their orbital detonations remains and the massive star's energy remains more or less trapped, blocked and dark. Also, there are apparently quite a number of these solitary "Black Holes" or "Galactic Consolidation Stars" in the universe today.
Phase-5: The galaxy star begins to reabsorb its dust cloud and the star glows bright again. This increases its gravitational attraction until the galaxy star draws in to and collides with another of its kind.

Phase-6: The galaxy star collision causes a shockwave that disrupts the dust clouds of other nearby galaxy stars and causes more galaxy star to glow brighter and emit more of all sorts of energy. More on this below.

Galaxy stars are unstable
And highly explosive
It is not hard to imagine that the immense galaxy stars are extremely explosive if hit with enough force, like say from hitting another galaxy star.

And as these get near each other, gravity tends to cause one to explode and then the explosion detonates the other. Then the two explosion fields pass through each other at immense speed. And perhaps this is a situation primed for a sort of galaxy-scale H-bomb explosion (or pair of such explosions).

Or perhaps the galaxy stars miss one another, and Instead, they are torn apart (exploding) one by the other's gravity, exploding and flinging super-hot material along two wide arcs at the same time.

The nothingness of space
What is outside your single "universe"? Is it nothingness? What would be the difference if the nothingness contained a zillion galaxy-scale universes now called galaxies.

Universes called galaxies?
99.99999% independent galaxy-scale universes are now called galaxies. These are totally independent except when they collide in pairs.

Galaxy star monad phase

Black hole dust clouds as eddys
As a galaxy of stars is absorbed by the single galactic consolidation star at its center, it produces this rather (but not completely) eternal dust cloud which does not even start clearing until eons after the last star was absorbed. Thus the dust cloud can be seen as a sort of eddy from the absorbed stars.

The galaxy star dust vortex
There is a tornado-like vortex at the end. It all spins very fast and at increasing speeds. Besides, anyway, all the stars and planets that get to close to each other tend to explode and almost atomize. Then there are still more collisions. So the material is mostly blown or knocked to bits like tiny pieces of volcanic ash. That is what is screening all the Galaxy-stars.

Galaxy stars are shrouded till the end
From the time a proto-galaxy-star forms in a new galaxy until the cloud finally starts to clear, there appears to be a continuous cloud of something like volcanic dust. So when the galaxy stars do finally clear, the universe would seem to grow brighter, and perhaps become functionally "smaller" due to higher heat/energy levels. Or perhaps time is simply accelerated by absence of the dust clouding/ shrouding whatever energy (or energies) that drive time.

Galaxy stars enlarge and then shrink space
In their dark phase, Galaxy stars have a thick cloud of dust reflecting-back and holding on to light and

other emitted energy. While the star-darkening cloud exists, it makes space "larger" with respect to the energy of the Galaxy-Star with its Galaxy-Star neighbors. But when the cloud of debris clears, light and other energy emissions rise, and then space becomes "smaller" with regard to gravity and other similar energies.

Does heat enlarge plasma-spheres?
Perhaps as the dust cloud of a Galaxy-Star clears, the space that was previously outside the dust cloud: surely this gets hotter. Perhaps the “plasma-sphere” of the Star grows much much bigger. Maybe this enlarged plasma-sphere is what shrinks space with regard to the gravity of the Galaxy-Stars. Gravity is highly correlated to heat after all. If the cloud of dust keeps the heat in, maybe it also keeps the gravity in as well to some extent… as long as the dust cloud exists.

Perhaps as the inner dust cloud clears, the outer part becomes much hotter and gravity thus becomes much stronger. So perhaps the dust clouds around the Galaxy-Stars get to a certain point and then clear the remaining dust suddenly, all at once over say only 100,000 years. The surrounding space then gets much hotter… approaching infinite heat like the galaxy star. And with the heat comes near and infinitely small resistance as a plasma. So the heat and plasma conduction (bet it heat, electricity, or gravity) is conveyed vastly greater distances into space, light years into space apparently, until two galaxy stars experience a gravity lock with each other. The shockwaves of this impact compress in one direction and cause a chain reaction with the other nearby Galaxy-Stars. Thus the big bang sort of burns through space over many billions of years — with galaxies colliding one pair after another in a giant shockwave that marches across the universe.

The late phase, the red phase
If the dust doesn’t finally clear, then it probably goes long tail. But space still shrinks and shrinks until there is a gravity lock and first collision.

Galaxy star collisions

Lots of time to accelerate
When galaxy stars collide, they start heading towards each other when they are at least a galaxy apart. And then they travel for a very long time, ever accelerating until they slam into each other at immense speed.

Think of the distance that galaxy stars travel, their mass, and their gravitational pull. They are going so fast when they "collide". I use quotation marks for "collide" because I think that one galaxy star and then the other probably explodes in a massive galaxy-star-scale H-bomb explosion before they actually collide. This results in lots of fluid matter turned to the sort of hot spray we previously discussed.

So we imagine two bright galaxy stars heading into each other at some fraction, or perhaps some multiple of the speed of light. Then there is one and then another giant zigaton H-bomb explosion where the pits are the size of two galactic remainder stars, and the stars are moving at a fraction or multiple of light speed. That is a bang. That is what causes one of the big bangs in the chain reaction that remakes the universe.

And because the two main debris fields remain gravity close for some time (and more importantly some orbits) after they have passed each other, they create galactic planes.

The near universal disc shape of galaxies speaks of collisions between two similar scale masses, each getting away with a substantial amount of material from the other. And critically, material in orbits aligned/ parallel to the other departing galaxy star's gravity.

When Galaxy Stars collide, they hit at speeds at least as fast as the fastest stars today. This is 8% of the speed of light. And this is in today's old and slow universe. So maybe the galaxy stars were moving at the speed of light when they hit. Or maybe it was 10x the speed of light... just before they draw together like galaxy scale magnets on a zillion mile crash course with each other, faster and faster they went.

Kinetic energy converts to heat
Maybe the galaxy star nuclear explosion is not happening. Maybe is is just a huge amount of heat produced from two galaxy stars slamming into each other at say 10% or 10x of the speed of light.

The tsunami
At least near the epicenter, where the two galaxy stars collided, the shockwave sweeps along everything in its path. Whatever it contacts gets swept along like floating things on ocean waves. The wave hits the first thing, pick it up, and then the next, picking it up too. What was once a broad field becomes a narrow front. Thus space is compressed in that one dimension, outward from the bang. Then this tends to put more galaxy stars within gravity reach of each other, setting them in motion towards their eventual collisions in a giant chain reaction.

The shockwave accelerates absorption of the orbital dust clouds by disturbing them
So when two galaxy stars collide, it causes a shockwave that sweeps through nearby space disturbing the orbital dust clouds of all the other nearby galaxy stars. This greatly accelerates reabsorption of the material that blankets the energy of the star and keeping it contained. So with more of this suddenly reabsorbed, there is a sudden brightening of the effects of all the nearby galaxy stars. Essentially energy emissions rise while the size of space remains the same. Thus gravity increases in force.
This increase in gravity causes many galaxy stars to come into each other's gravity range. Then it may take decades or millennia for them to eventually collide. But their collision will continue the big bang process, a chain reaction essentially.

Like popcorn
The first shockwave might only causes a couple other collisions, or maybe it is 50, but there seems to be a nuclear (fission) chain reaction aspect to the big bang collisions. Thus we imagine that the big bang unfolds on a bell curve, much like popcorn popping. Rather fast spreading locally, but it still might take billions of years to unfold across the entire universe.

It is the long-tail dissipation of this original bang collision energy in our still-hot star and still-hot planet that powers and sustains life on our planet and surely everywhere else.

Mines too close together
One way to imagine a distributed big bang, is to imagine a mine field. But this is a foolish minefield that nobody would ever make. This is because the mines are too strong, too sensitive, and too close together. Also there are five-hundred 100g steel balls. And each of these will detonate another mine if it hits one. So the entire minefield is prone to chain-reactions. One mine goes off and then all the mines tend to go off. And maybe depending on how close they are to one another, we can have between 0.1 and 100 other mines detonating once one goes off.

So this minefield periodically tends to clear itself completely, and that is what I think big bangs are. They are from the mass detonation of a minefield of a zillion galaxies that have cleared their volcanic ash and grown too close together. So they have this cyclical cascade of collisions every so many billion years.

Discs mean collisions
There needs to be two very large objects the scale of a galaxy to get galactic discs. It is a good thing we have a source for that in our theory.

Where you going is where you've been
1/ The galaxies we have today all seem to be turning into giant galaxy stars.
2/ Collisions between two giant galaxy stars are exactly what would form a pair of galactic disc.

Synchronized little bangs
The end is the beginning
Look around. All galaxies are obviously going down the drain. And the end of each galaxy is obviously consolidation into a giant galactic remainder star. Then these are drawn together somehow. And they can't sustain even proximity, or they will slam into each other and explode. So something shrinks space relative to gravity and they all start colliding. and producing pairs of galaxies.

The great galactic migration
Do galaxies all migrate and consolidate in a single distant part of space? The idea is crazy. Where does the energy come from? Or is there perhaps an energy flow that detonates them all in place?

Big bangs as a distributed and periodic cycle
It appears the universe is a place of galaxies that consolidate into galaxy stars and then collide in these great messy cyclical conflagrations. The debris of which forms into new galaxies that consolidated again.

Big bang is a misnomer
The term “big bang” as a misnomer, for the universe seems to have been created by lots of little bangs like the Chinese firecracker sheets with hundreds of pops per sheet.

So the "big bang" wasn't a single large explosion. Instead it was lots of galaxy stars colliding and creating galactic discs and this unfolded over however long it took for the shockwave to travel the universe.

The real multiverse
The universe seems to be a place of multiple "cloned" galaxies that more or less stay independent until their demise, long after they have gone 100% down the drain into galactic consolidation stars. Then there is a volcanic dust phase. Then there is clearing. Then there is a brief "mating" phase, and then eons of isolation again.

A much lower energy big bang
Which creation myth uses less energy?
Which creation myth takes less time?
Universe-A: Where all the matter is gathered in one place and then hurled back out.
Universe-B: Where the gathering and hurling is done in galaxy-sized districts.

Distributed bangs match reality better
1/ A distributed big bang uses vastly less energy, because the galaxies all more or less stay where they are. There is no need for consolidation or hurling energy. And we must be biased towards low energy explanations.
2/ A single bang doesn't fit well with the distribution of material we see in space. Does the universe have a center? If no detectable center exists, this also better fits better with a distributed Big Bang model.
3/ Collisions between galaxy stars explain the galactic discs we see everywhere.
4/ It is audacious for anyone to insist that there was only one big bang. Nobody knows this for certain.
5/ We can see all the galaxies consolidating into single Galaxy stars. Then what? Do they all then consolidate again, or do they re-explode roughly where they?
6/ How do we get two super-explosive Galaxy stars to merge without exploding? How can 3 or more Galaxy stars merge?
7/ A single big bang theory resonates so nicely with single creator gods, even lending vague supporting the idea of a creator god . This should make us skeptical of the idea.
8/ Everyone meekly accepts a single big bang without any evidence at all.
9/ It gets so much coverage in the media. It even has its own totally iconic genius, a sphinx of a man incapable of speaking to another human without the use of his artificial speak-and-spell voice, an oracle of a person with at least 5 films made about his life.

Galaxy vs. galaxy star collisions
When galaxies collide, there is a whole lot of space involved, so the energy release is much more spread out both over space and over time. When galaxy stars collide, the energy release is much more concentrated, both over space and over time.

Synchronized bangs
Maybe all parts of the universe live for only say 20 billion years, give or take 5 billion years on either side. So the whole thing starts going off after 15 billion years, and almost nothing lasts more than say 22 billion years.

2 Galaxy stars, 2 charges?
I do not believe that what we call a negative charge is the stuff from one Galaxy star and what we call a positive charge is the stuff from the other Galaxy star. I think all the impact does is power up the matter.

Galaxies and stars in pairs?
What if the halves are all pointed at each other? What if most galaxies exist in pairs or parallels. From here, the idea of the parallel universe looks like a blid, (a blocking idea) for parallel galaxies.

Zebra stripes
There may be galaxies and solar systems forming in one part of the universe, while there are still galaxy stars colliding in another part. So we sort of imagine a bang as this wave that sweeps across the universe, like a brushfire might burn out from one epicenter.

How galaxies begin
They start out much bigger but with much smaller galactic consolidation stars at their centers. As time goes on, the galaxy of stars gets smaller, while the galaxy star grows in size from consuming the galaxy of stars.

The energy of a bang
When two galaxy stars collide, we see kinetic energy certainly, but also electro-heat energy. The former makes the skies go round, and the latter gives the sun and the universe heat and light energy to sustain life.

The universe isn't stable
It's just stable now on the long tails of the great saddle. At the beginnings and the ends (they join), each galaxy becomes totally violent.

Perhaps the number of galaxies halves in each cycle of the universe.

The 3-ring circus
Everything forms at once
It all happened mostly at once
I see the formation of the universe as a "multi-ring circus" all mostly happening at once in the first 1% of the universe's existence:
In the 1st-ring: We see this semi-synchronized collision front of galaxy stars that might have taken eons to unfold.
In the 2nd-ring: We see the formation of Galaxy stars at the center of each galaxy.
In the 3rd-ring: We see stars and orbital discs forming
In the 4th-ring: We see stars sweeping space clean of debris.
In the 5th-ring: We see lots of stars colliding with "G2" forming solar system planes.
In the 6th-ring: We see secondary gravity playing on earth's lithosphere creating its rift system.
We see the formation of tectonic cracks and deep outgassing "warmhole" channels for conveying volcanic gas bubbles to the surface.
In the 7th-ring: we see the formation of early atmospheres from all the outgassing.

But it all happened at once, and very early on. And now the universe is just different because it has grown so spread-out. There are lots of things that simply don't happen at all any more. And when things do happen, they are happening zillions of times slower than at the beginning. This is because everything is just so spread out now, and it takes so so much time and energy to get from here to there now.

A front-loaded cosmology timeline
Things are mostly all being created at the beginning of the universe. We have galaxies forming while the stars are forming and while stars are colliding, and while orbital discs are being created. And this is at the same time that the planets are forming hard skins and tectonic plates. All of it right in the beginning of time. So to my mind, if the planet is 4.3 billion years old, the universe is just as old.

A front loaded solar-system creation scenario
1/ The pull of the other star's gravity was maximal in the moments after the collision. So within a year maybe 80% of the non-perpendicular debris was gone, and then it was 80% of 80% = 96% in the 2nd year, and 99.2% the the 3rd year, and so forth. Thus, after very little time, the stellar collision material was gone, pulled off by the gravity of the other star. Then nearly all the material left was in a plane, which formed immediately after the collision (at least on an astronomical time scale). And again, this disc was all that remained from a big spherical cloud of dust and debris that only briefly existed.
2/ With the exception of a collision involving the planet that existed where the asteroid belt is today ... pretty much everything important that happened in our solar system seems to have happened either right after the galaxy formed, or at the same time.
3/ Maybe I exaggerate the early loading of time here. Maybe only 95% of stellar interactions happened in the first 5% of time, or something like that. I lean however towards 99% in the first 1%.

Does not compute
If you google-up the size of the universe, you get 93-billion light years. If you google the age of the universe, you get 18-billion years. If everything is moving slower than light speed (and it seems it is going much much slower) how do we get such a big universe in such a small time?

The planets and their orbital velocities
mm = million miles out from the sun
Mercury (43mm out) has 1.6X Earth's orbital velocity.
Venus (67mm out) has 1.17X Earth's orbital velocity.
Earth (93mm out) has 1.0X Earth's orbital velocity.
Mars (142mm out) has 0.8X Earth's orbital velocity.
Jupiter (483mm out) has 0.43X Earth's orbital velocity.

Saturn (889mm out) has 0.32X Earth's orbital velocity.
Uranus (1,784mm out) has 0.23X Earth's orbital velocity.
Neptune (2,780mm out) has 0.18X Earth's orbital velocity.

With Mercury R=36mm (million miles), so it is 36mm squared (1,296 X10^12) and with Neptune R=2,798mm, so it is 2,798mm squared (7,828,804 X10^12). So the "sphere" of Neptunes orbit has 6,040 times the surface area that the "sphere" of Mercury's orbit has. In other words, we should expect the sun's gravity share is 6,040 times stronger on Mercury than on Neptune. But Mercury is only going 8.9 times faster.

Is time going running slower out by Neptune?
Mercury is 36mm out
Earth is 93mm out
Neptune is 2,798mm out
Maybe time is running twice as faster for Mars and 1/10th as fast for Neptune. Maybe we are living in a gravitational time distortion that is making the empty space around us seem bigger than it is.

"Time Trap" sci-fi film
In this film, there are these tiny areas on earth where time runs slower. I think inter-stellar space is like that.

Gravity lensed light
How much is Earth's gravity lensing the starlight we are looking at?

Astronomical and universal distortion
Maybe the nature of extra-gravitational space exaggerates time to near infinity. Maybe the inter-stellar regions are almost infinitely smaller than they seam. For all we know, interstellar space is actually like bath bubble foam, with bubble-like inflection points that appear to be nearly infinite to their denizens, but are actually mere membranes when seen objectively.

Occam's razor

Why suppose they interacted
If galaxies are all independent now, we need a reason to think they ever interacted.

Good scientific biases
1/ The theory takes less energy.
2/ The theory takes less time.
3/ There is less movement.
4/ There are fewer preconditions.
5/ It involves big things changing small ones.
X/ It shouldn't matter how simple an explanation is except when we are in the dark. Any empirical evidence at all should overrule simplicity of explanation.

Occam's razor isn't real
Here is the original pivotal text of Occam's razor from 1347, written in the year that the Bubonic plague slammed Europe. This was also when the social and media rumor-mills of the Europe went into full swing blaming Jews for poisoning wells.

William of Occam, Book-2, 3rd conclusion
"Pluralitas non est ponenda sine necessitate"

This is normally and erroneously translated as, "The simplest answer is normally the right one." But the actual words are easy to see "A plurality (multiple reasons or blame) isn't placed without necessity." In other words: "don't blame anyone else".

Go and read the rest of the original text online. It isn't a long work. It is complete disconnected rubbish that makes no statements at all about what it is supposed to talk about. The only thing that connects to anything is this one vague phrase that means nothing related to what it is supposed to be about. Talk about fake reality!

Where we see recursion
Where we see patterns repeated recursively, it tends to be the truth. The same type of early secondary gravity that formed the galactic disc, also apparently formed the disc of the solar system. What works on the eddies also works on the eddies of eddies (galaxy and star system), and the eddies of eddies of eddies (galaxy, star system, and moons).

Time

The speed of light remains constant but the size of the universe has changed
Early on, when the universe was a much smaller, the effective speed of light was much faster than in today's totally hyper-inflated universe of immense distances. How much bigger is the universe now? That is how much slower the effective speed of light is.

Things move a lot slower out in the countryside
Intergalactic space far from any matter experiences almost no time, no network effect of being around other matter. In these far-off regions, all activity slows way down.

If there is no meaningful way to quantify something...
Let's not hide this important fact with precise statements. Give a range,

The age & size of the universe
Perhaps the age and size of the universe have no meaning because time is far from constant.

What time rate do we use #1?
When measuring the universe, do we use Earth time? Do we use the near "absolute zero" time of interstellar space in an old universe? Do we use the near infinitely fast time occurring near the biggest stars at the center of our galaxies? Do we use the time of the beginning, or the time of today's long tail?

Which time rate do we use #2?
How can we on the long tail talk meaningfully about time on the short spike in the early universe? We are Flatlanders (as in the book) trying to conceive of a universe when time was genuinely a dimension. Because, in this part of the "Universal Cycle", time isn't really a "vertical" dimension any longer, except inside stars, or perhaps deep inside planets.

The power curve bend
The 4th dimension is related to the variable abruptness of the power curve bend, depending on how far away the viewer is. Here we can see an example of the 4th dimension of scale/distance/subjectivity. And the 4th dimension is still a dimension related to physical distance. The 5th dimension of time is depicted by the power curve line itself.

Galaxies as disconnected multiverses
I have a multiverse conception of time. I see the universe governed by multiple clocks rather than one universal one. Some times are here and some are there. Also, there is an accelerated formation time at the beginning, and an accelerated entropy time at the end. There is another time/rate for electron movement. There is time for planets to cool. And there is time for bio-organisms to live their lives. But there is no master time for all these things. In other words, there is no orchestra leader and the various instruments are just all playing all sorts of music at all sorts of tempos, and all at once.

Just because we can see things occurring as processes around us, and these appear in some way synchronized... surely this does not necessarily imply that the same clock is governing both. They might be as unrelated as some stars are. So I don't believe in a universal time. I don't think we can insist that there is only one time. There are many clocks in nature all spinning at once, and all going different speeds.

The age and size of the universe
The constant-ness of time and distance in the universe are not a thing that should be presumed. Time and distance could be consistent, but they also could vary greatly. They certainly seem distorted in a then-as-opposed-to-now way.

Also, there is no meaningful way to quantify it. So here we might use the word timeless. This does not mean that the universe was without beginning, it means that we will will never know for sure how old it is. Also again, the age of the universe is probably a fixed number, but a range. And here we might say between say 4.5-billion to 120-billion years.

Fireworks and universal time
Those fireworks that burst out super fast and then slow down and stop. That is how I see the age of the universe. How do we at the long tail end of a burst quantify the speed at the beginning? How do we so near the sun understand the time of Neptune and farther out?

A time probe spacecraft
Gravitational attraction is of course related to distance. Is it also related to time rate? We might send a heat insensitive probe spiraling into the sun over several years. This craft has a variety of accurate clocks on board. Identical clocks are kept in an oven of matching temperature on Earth. How much does time accelerate on the probe? This will tell us if molecular time is also a network effect, for it might not be. It might also be useful to have some other chemical and electronic processes such as the timed burning of a magnesium filament in an oxygen tube.

Then again, maybe time mostly manifests as temperature, and by keeping the clocks the same temperature they experience the same time.

Can we accelerate clocks with energy?
Is there some sort of energy other than heat that will accelerate some clocks? Maybe what we call heat is the main element of differential time.

Using temperature as a proxy for time rate
Maybe absent a better metric, we should use temperature in degrees Kelvin as a proxy for the time rate. So the vacuum of space is 2.7°K, the average surface temperature on Earth is around 290°K, and inside the Sun it is supposedly 27,000,000°K. Perhaps this is also the relative time-rate of these places. And perhaps time is happening at 27-million°K in the center of the sun, while here on earth it is around 290°K on average. So the center of the sun is about 93,100 times hotter, and by presumption faster. Meanwhile the temperature of space is 2.7°K, about 108X slower. So on the sun side it gets 93,100X hotter and faster, and on the space side, it gets about 108X colder and slower. And that's how far down the long tail we are. Also, perhaps it is some formula for time, like the cube root of 27-million°K vs. the cube root of 290°K.

The temperature of space is 2.7°K
This looks like the residual afterglow from the big bang. Space was probably initially much much hotter.

Gravity and the rate time
I would take temperatures on the sun's surface and at various distances to make a curve. Then I would do the same thin for solar gravity using the various orbital velocities. What is the formula to get from one curve to the other?

Heat diminishing faster than mass
Does the sun's distance-to-temperature curve match its distance-to-gravity curve? Are these different things, or are they different aspects of the same thing? It is easy to imagine that the average star's heat output might be diminishing faster than its mass and gravity at say 100-million miles out. What about the time rate?

Our lifespans compared to the planet's
If Earth is 4.6 billion years old, there have been 46 million 100-year periods. If a person lives to age 87, they will have lived for 46 million minutes. So human lifetime is like a minute for our planet's lifespan

Time: Fast-slow-slow-slow-slow-slow-fast
Time was fast at the beginning of the universe when everything was close together. In the beginning, lots of stuff happened in a very short period of time. Then time tails off for billions of years. Then, after the galaxies condensed into galaxy stars, there is another fast phase at the end.

Imagine two opposing power curves forming a long and flat saddle in between them that is barely above zero. Here is how time works for the universe. Time runs fast in the beginning and in the end, extremely fast, thousands or millions of times faster at the beginning and at the end. But in the middle, where we live, time slows down to a snail's pace.

Is heat time?
Perhaps heat doesn't just resemble time in many ways, perhaps heat is time in many ways.

Time and gravity
Faster time probably increases whatever force causes matter to draw together into space clumps, just like reduced distance.

The generation of gravity
I see gravity as an atomic charge that forms a sort of "magnetic field". There is a network effect which can develop an immense field that can extend far from its source. But it is still like the force from the electromagnets we see at scrap yards. Its effects are highly localized due to the dilution of effect that distance and field size causes. The attractive forces quickly go long tail and become insignificant.

Likewise, gravity's effects don't go very far outward. Go too far out and there is no-reaction, no pull. And this is exactly what we see with stars and galaxies. So very large objects come to have these enormous attractive fields around them drawing in other objects. But the distances are so massive that everything is (in the old universe) far from the gravitational reach of its neighbors... fortunately!

A single big bang?
Just look at any galaxy photo. The volume of intergalactic space is vast in comparison to the space within the galaxies. In a distributed big bang, we don't need to concern ourselves with inter-galactic distribution and gravitational pull, and energy for re-collection of matter from these areas, the other "99%" of space. In a distributed big bang, the only space that matters is the space within and near the galaxies.

The fabric of space
The fabric of time
Space time
There is nothing in space, no matter, no network effects. So these memes seem like science fiction to me.

Space doesn't warp or fold
Space is nothingness. This idea is just more science fiction.

How utterly peaceful space is
Think of the Earth flying around the sun at 107,000-Km per hour. Look at how the upper atmosphere is totally undisturbed by its passage through the vacuum of space. This is because there is nothing there. And the all space-time fabric is all in your head.

Where are all the electrons coming from?
Maybe due to gravity and heat stars have this super high-pressure/ high-energy electron plasma sea sloshing among their matter. Maybe this is constantly emitting electrons and heat into space.

Is gravity an aspect of time?
Do variable time rates cause gravity?

Heat

Earth is obviously still hot
Is the sun mostly just still hot?

Relative time in our solar system
If heat is a proxy for time, then the surface of our planet has a 288°K time zone and the center of the Sun is in a 27-million°K time zone, 93,750X more.

Is temperature an aspect of time?
Higher temperatures normally accelerate reactions. So if heat is not time, it sure acts a lot like time.

The universe is much cooler
Early on, the stars not only were hotter, but everything was close together. Today the stars are cooler and everything is more spread out.

The temperature of space
This currently approaches absolute zero. However, right after the big Bang, space was almost infinitely smaller, hotter and brighter, and time proceeded almost infinitely faster. Today's geriatric universe is vastly bigger, and emissions of heat/ light/ time vastly lower. So most parts away from a star are nearly absolute zero... and likewise with gravity and time levels.

Over time, lithe and live-ly science normally hardens into totally rigid and dead dogma.

Spok's law
Fictional science authorities often spout real-world science propaganda.

Hubble
Kudos for discovering the universe of galaxies beyond our own galaxy. But if we can see more or less the same distance in every direction, we're probably not seeing the limit of the universe. It's more likely that we're seeing the limit of our ability to see. And yes, I understand that we are talking about seeing back in time and not distance. It is just that I don't think time is different from the 3D "Cartesian" dimensions.

We see this on our own planet when we gaze at the horizon. We also see this when we use our unaided eyes to look at the skies. We also see this in the water. What reason do we have for thinking otherwise when we try to explain the universe?

Whatever we see changing mostly a function of distance from our vantage point is probably a

distortion of distance and perception rather than a genuine aspect of reality.

Also, if the universe is universally less dense or cooler (or something else) in one direction than the other, it also suggests that the universe is bigger than our ability to see.

Smack in the center of the universe
Copernicus taught us that we are not at the center of things, yet Edwin Hubble put us back in the center. Unless we are off-center by some significant measure, we are probably only seeing the limit of our own perceptual ability.

The edge of the universe
Maybe the edge of the perceptible universe is the point in time when the space smog starts rising (on a power curve) and getting real thick as we go back in time. Stars after all get more red the father away they are.

Einstein
Voyager 1's transmission signal was some 7% slower per kilometer than Voyager 2's. An alternate explanation for this is that time simply occurs faster when it is part of a larger network of matter, such as exists closer to a star or planet. This is also why the Halo at the center of our galaxy has the oldest stars, and the spiral arms the youngest stars. Maybe time simply happened faster at the center of the galaxy.

Thus I believe that simply moving away from a star causes time to slow down. And it is similar to the lower interaction levels and slower business activity that occur outside of the biggest cities. Time doesn't slow down because you drive from New York into the countryside really fast, time slows down when you move away from the time nexus of the big city.

Also, if we flip the causality of Einstein's relativity theory (sacred & canonized as it is), we get a congruence that suggests a sort of grand unifying principle for all science, economics and even evolution. We get something that is probably the cornerstone of all universal organizing principals: That larger networks experience greater time and as a result out-run, out-grow, or outlive other networks that are experiencing less time. It is basically another application of Metcalfe's law: The value/ power/ speed/ adaptability of a network increases in proportion to the square of its size.

Bending space-time
The idea of space and time bending isn't totally wrong. But it seems more accurate to say that time occurs faster in some places due to a network effect of matter.

Was Stephen Hawking real?
1/ He was so iconic, as a figurehead should be, as Einstein was.
2/ This great scientist only became brilliant and famous as he became mostly paralyzed, unable to communicate, and desperate.
3/ He communicates via a black box that could permit others to hear and speak for him. Like like John Gill from Star Trek episode "Patterns of Force" 1968.02.16. This is the episode with Teutonic-looking aliens wearing Nazi costumes and Gill was their drugged figurehead frontman leader.
4/ He was regularly talked about in the media, and —5 —FIVE!— films were made about him, as if someone was trying to reify the genius of their black-box oracle science frontman. [Theory of Everything 2014, Hawking 2013, Beyond the Horizon 2009, Hawking 2004, A brief History of time 1991]

Iconic looking people tend to be frontmen
Isn't it strange how the personifications of both genius and evil, have such iconic appearances? (Einstein, Hawking, Kim, Bin Laden, Gaddafi, Khomeini, Hitler)

Stephen Hawking and Alexander the Great
Funny how Stephen Hawking, is sort-of billed as the world's most brilliant scientist, yet he can't actually speak for himself. He is a modern day A•lex•ander, a man incapable of saying anything by himself, the perfect front-man able to say whatever his masters program his communicator to say. Hawking certainly seems like a classic (A•LEX•IC=no•words) frontman.

Expanding universe

The expansion of space and the slowing of time both seem to be aspects of the same process — the larger volume of corresponding to the slowing of time.

How do pool drains work?
Let's sprinkle some pools with styrofoam kernels and then drain them. Let's record and analyze how and when the styrofoam goes down the drain and use this to model galactic contraction.

Maybe the universe isn't expanding,
Maybe our galaxy-drain is shrinking.
Has the universe expanded, or have the galaxies all contracted leaving nothingness in place of the field they are drawing in from.

A universe that simultaneously
expands and contracts
Maybe the overall universe is expanding, but the galaxies are fields of stars spiraling down the drain and contracting into Galaxy stars, like an expanding mist condensing into droplets.

A glowing universe
The universe glowed with blinding intensity everywhere for eons after the bang. Now the 2.7°universe is of course pretty much dark everywhere except right around stars.

The current electron environment
Now the universe is way down the long tail. Nowadays the universe is an ultra low intensity place with regards to electrons and heat. After all, most planets are a couple hundred degrees above absolute zero, and space is so dark it looks black. Funny idea it is that is that the universe was once blindingly bright for eons,
then it was quite bright for 10X as long,
then it was rather bright for 10X as long,
then it was a bit bright for 10X longer still,
then it was dim for 10X longer still,
then it barely glowed for 10X longer still
then it became afterglow for 10X longer still
then it went black for maybe 10 to 10,000 times longer still. That is where we are today. But the universe was really bright and full of deadly energy early on. Life is a thing of the long tail when the environments can support life.

A first organizing principle
1/ The biggest galaxies that sweep through the most space grow biggest.
2/ Big stars experience more time and gravity, and absorb more matter and grow bigger and glow hotter.
3/ Big evolutionary networks (populous species) tend to out evolve less populous species.
4/ Big cities tend to grow faster.
5/ Big companies tend to get bigger.
6/ Big fruits high up attracted the biggest animals these plants spread their seeds more widely and hence out evolved the plants with a small fruits (at least before the advent of flight).

The primary organizing principle of nature seems to be almost a vacuous truism in some ways. It is quite simply that THE BIG GET BIGGER, or MORE IS MORE. And more must generally be more, or better, or more powerful, or more agglomerative, or more survivable, or stronger, or smarter, or faster growing, or something else; or there is no growth, no evolution away from the decay of erosion, corrosion, and chaos. Scale must build. If scale does not build, then there is no network and no increasing organization, and chaos then rules whatever system we are talking about. So for all organizing system, more must be more, or they are not organizing and building, but decaying and falling into chaos.

1/ Bigger stars must have gotten bigger or the universe would be a homogenous if not somewhat lumpy soup.
2/ Bigger groups of stars must get bigger or there would be no star groups or galaxies.
3/ Complexity must out-survive simplicity or there is no evolution towards complexity.
4/ Bigger breeding populations must evolve faster than smaller ones, or there is little benefit of species scaling their populations.
5/ Popular genetic traits must grow more popular or there can be no evolution with a species.
6/ Popular species must grow more popular or there can be no evolution between species.
7/ Popular ideologies must become more popular or new ideologies can't supplant old ideologies.
8/ Bigger economies must out evolve smaller economies or there would be no economic reason for people to live together in cities.

There are many more examples, and thinking of these examples is one of the most useful and fruitful ways to learn about how the universe fundamentally works. But basically, the more interactive stuff you get in a clump, pile, heap, breeding population, star, galaxy, economy, etc., the greater the network effect and the faster time occurs for that clump of stuff.

Sub-atomic reality

Lop-sided electrons and wavelength
Try to imagine light particles as asymmetrical things — like a heavy bowling ball attached to a light volleyball. These spin as they move through space, which causes bobbing. This is why light particles travel in a wave form — and this is the real reason that light is both particle and wave. Light particles are asymmetrical things spinning and bobbing as they fly through space — the rotational speed being the same as the wavelength.

It also seems how negatively charged electrons are made up of two parts with different masses. The lighter positively charged component uses up a big part of the heavier component's negative charge — but not all of it. So there is still a net negative charge if we are talking about a negatively charged electron. For positrons the positive side is larger.

How electrons break free
Today people think that electrons move at the speed of light around their nucleus. We have no evidence that this is happening other than the fact that electrons move at the speed of light when they are emitted. I propose that we keep most of what we know about electrons, but toss out the part where they are moving at the speed of light around their nucleus. Instead, let's replace this conception with the idea that electrons are are electro-magnetically "snapped into" in a sort of floating electro-magnetic lattice that exists around an atomic nucleus.

Let's now get back to electrons breaking free. There are electro-magnetic charges holding each two-part, lop-sided electron in its shell position. And this two-charge aspect of electrons is also holding electrons in a particular orientation. Here we imagine throwing darts pointed down and suspended in space by electromagnetic forces.

Now if the larger/stronger side of the electron was attracting, the electrons would be drawn by the charge into contact with the nucleus. So the larger/stronger side seems to be repulsing. But this can be overpowered partly by the smaller/weaker side for some reason. Also perhaps there is an element of distance to things. Perhaps the smaller/weaker side of the electron gets closer to the nucleus, and the short-spike in its attractive force can overpower much of the repulsive force of the larger stronger part of the electron and thus grab onto the nucleus or the electron lattice.

So when electrons are drawn in to a nucleus, they are all oriented in the same polar way, like a bunch of bombs or dart falling from the sky around this tiny planet. The electrons will always land attractive side down on an atomic nucleus. (in other words attractive side down, repulsive side up). And if the repulsive side gets too close, it overpowers the attractive side. So there is no contact with the surface of the nucleus and the electron shells float above the surface.

And this system causes electrons to form in "shells" around a nucleus and to develop certain characteristic assemblage patterns. And some of these shell configurations are unstable and readily give off electrons, others are not. And anyone who has played with groups of magnets immediately understands the dynamics of the attraction/repulsion chemistry at work in electron shells.

But the moment the electron leaves its shell position, the charge holding it in place seems to suddenly flip. And where the electron was once held in place, it is suddenly flipped away and repelled at light speed. And again, this is the flipping rotation that is responsible for the lop-sided electron's wavelength.

Floating electron shells
The electrons are held by the nucleus at a particular distance. Then when this distance is filled up, they start to stack up in shells. First one or two electrons fit at opposite ends of the nucleus, Then it is 6 electrons fit in the next shell. Then it is more electrons and more shells. And at each level, it seems that electrons repel each other, and this repulsive force exceeds the attractive force of the nucleus once the shell is full. So that is where the additional shells come from. And this picture explains better why some chemicals have electrons to be picked off, or have a hunger for more electrons. Here the orbital cloud theory of electrons doesn't really make much sense in comparison.

Electron flipping speed and wavelength
Some elements flip electrons off fast, and some do it slower. This is why different elements emit light of different wavelengths. It is because the electrons

are flipped and spun-off at different rotational speeds.

Electric plasma
Imagine too many electrons stored in a naturally occurring battery like a rain cloud. Now try to imagine this electron plasma capable of behaving like water sloshing in a bucked, or water in a dropped bucket.

Light = Loose electrons in a vacuum, fluid, or plasma.
Electricity = Electrons as a fluid passed or squirted through an aligned electromagnetic lattice.

Heat from electrical resistance
This is when the flow of electrons is too high, and they start to collide with the transport medium and cause heat.

Light emissions and temperature
Red light has the longest and slowest wavelength of the colors. Here we note how metals glow dark red, then red, then white when heated. So at first, when the metal is not particularly hot, the light/electrons spun off are slow and red, then when the energy flow gets going, it streams off, as white light. So it appears that when the emitted electrons come-off slowly they are reddened, and their rotation is slowed down in the emission process, then once the electron flux has been fully established they are less red, and with white light spin.

Ultra Violent light
It isn't ultra-violet light, it is ultra-violent light. It's called this because it is radiation and harmful to life forms. The volleyball and bowling ball are spinning faster and they tend to impart more energy and more destruction. This image also explains why high frequency light resembles energy more, and low frequency light resembles matter more.

The visible spectrum
On one hand, the light needs enough spin energy to be reactive and perceptible, but not so much spin energy that it becomes violent and destructive.

The power of ultra-violent light
UV light has a short wavelength, so the volleyball and the bowling ball are spinning fast. When this sort of light hits something, it disrupts the matter. For life forms, especially viruses (which are naked DNA), the ultra-violent light is corrosive.

Radiation
If the electron is spinning fast enough and has enough energy, its just blasts through and tears up the atomic structure, like X-Rays do. These super-fast spinners don't really impart much energy the normal way. Mostly they just tear through and destroy atoms by slamming through them, one after another until they are eventually stopped.

The fast early universe
We imagine an early universe where all the particles were super highly charged and spinning/vibrating/charged-up at immense levels. We also imagine a universe full of gamma and x-rays that passed through everything, disrupting everything, but also charging it up, spreading the "wealth" of energy from the origin, helping to energize and power-up all parts of the universe.

The early universe was much more radioactive. Today's old and long tail universe is much less radioactive.

The real red shift?
Perhaps the real reason for the red shift is that reflected light is always slower and hence redder. This is why dust reddens light. If the stuff being hit by light is transparent, like water vapor, there is no red shift. This is after all what we see on Earth.

The perception of color
Some frequencies of light are just not well absorbed by certain materials. Thus they reflect as the color we see. It is a curious thing that materials should generally bounce certain light frequencies, and not absorb them. Why should light of a particular wavelength not enter particular materials, but instead tend to bounce back? On an electron level, why is this occurring? Why is this one particular frequency not able to enter the electron lattice of that material?

Once we view light as a spinning asymmetrical thing, we realize that it is the spin rate that determines what part of the EM spectrum is absorbed, and what bounces off a surface. Here is what I think happens when certain types of material reflect light on a particular wavelength. The

electrons of a particular frequency readily enter the material, and are normally passed on.

However if the light is of a particular wavelength, it synchs with the spin of the electrons in the material. This light either produces a "splash" effect on the surface, among the existing electrons, or perhaps there is a sort of "vacuum brush effect", and instead of being passed on at 180° from the light's incidence, a bunch of the light does a 360° U-turn and is released back out through the surface it came from. This is probably similar to the way electricity is conveyed.

How temperature affects spectroscopy color?
This seems like the window into understanding more about what temperature actually is.

Light and life
We're not exactly these things made of light. But we're ultimately powered by external stellar light, and we're mostly made of light's by-product, water. And we are not entirely light and solar energy. There's a great deal of matter from our planet In us.

The wrong model
How exactly does angular momentum balance with gravity on the atomic scale? This is the model of orbiting stellar collision debris, and where most material is eventually reabsorbed. This is not the right model for electrons around a nucleus.

Also if angular momentum is balanced with gravity, this is the stuff of variable sized orbital systems, not the regular sizes of the atomic world.

A perpetual motion machine?
Electrons in an orbital cloud are supposed to be in eternal motion. If we are using the magnetic lattice model of electrons, energy is only needed for a millisecond, as the electrons are flipped away and emitted. So the orbital cloud theory uses a zillion times more energy. And for this reason it is harder to believe.

Bohr shell lattice
The first stable state has up to two electrons, the next one has 6. It is a 3 + 3 arrangement, 3 in each hemisphere around the first two electrons. Also, each 3 is probably offset by 60° to the other around the "equator" created by the two "polar" electrons. Thus this 1st electron shell makes the atom football-shaped, the second more lentil-shaped and barely taller than the upright football shape.

Bohr's shells as polyhedrons or "crystals"
In textbooks we see Bohr shells presented like concentric round orbital shells. However, we switch to an electron lattice model, the shells are probably polyhedrons or atom "crystals" that are subject to forming and grouping in a certain uniform way for all elements.

Bohr shells as magnetic bottles
The electrons are not orbiting the nucleus at the speed of light, but locked in place by a sort of naturally occurring magnetic bottle. And this is a bottle that is subject to configuration in certain charge-stable ways. Also apparently, the floating electrons will easily rotate around the nucleus if disturbed... flying around in orbit like an air hockey puck.

Multiple paired electrons in all the shells
A curious thing about Bohr's shells is that they all have even numbers of electrons, a fact that implies pairing. So we come to this image of electrons as perhaps "preferring" to exist in pairs or being more stable if they exist in pairs around a nucleus. So maybe we also view electron shells as a multi-pair sort of thing, with the pairs rotating to equidistance from each other in their each shell.

2 electrons in the 1st Bohr shell
Even numbered shell positions
The first Bohr shell has 2 electrons and all the subsequent shells have an even number of electrons. This suggests that electrons might be in a paired relationship with another electron on the other side of the nucleus. Each of the two in the pair perhaps oriented like throwing darts pointed at the nucleus, but repulsed by each other. Thus they stay in this hover-board position above the surface of the nucleus. I started out using this as the counter-force to the attraction of the nucleus. I gave it up because odd-numbered electron configurations exist. I probably prefer this explanation if the odd numbered electron problem can be solved.

Which model uses less energy?
Bohr shells = strong eternal angular momentum held by strong eternal microgravity.

Magnetic shells = micro charges held by stable micro magnetism that is only "flipped off" and reversed for a millisecond.

Boring y Que mystery!
The word chemistry sounds like "Que•mystery", or "what a mystery". Niels Bohr creates a word association that makes chemistry seem boring. And this Bohr/boring "math "and scientific notation goes right in front of our chemistry studies. Maybe we give both of these two things as overview in the beginning. Maybe we should break these up and come back to them many times over the first year.

Hydrogen has only one electron
With only one proton and one electron, hydrogen seems to be a problem for my model. However Hydrogen normally exists as H2. So we imagine two nuclei stuck together, with two electrons in orbit around the pair.

Electron speed
Why do we think that electrons orbit at the speed of light? This does not necessarily follow from the fact that they emit at light speed.

Light striking a surface
Some of the light gets absorbed, and some reflected. The absorbed electrons enter the surface and impart their energy warming it, although some bounce off and warm the surrounding things.

Heat equalization
Could this also be described as electron rotation speed sync?

What is heat energy?
Once we get rid of Bohr's light-speed orbiting electrons, we are free to use electron rotation speed for something else like heat. Perhaps when the electron shells are rotating faster around their nucleus, this is what we perceive as heat. Or perhaps the spinning electrons are causing vibrations. Either would account for the way temperature equalizes. It is also easy to imagine that atoms might also be more likely to nest (solidify/ condense/ crystalize) if spinning/vibrating slower.

HARD SCIENCE = when there are many solid fact to connect
ETHERIAL SCIENCE or THEORY-AL SCIENCE = when there is not much solid to connect to.

Mass and time
Perhaps what we call "heavier" materials tend to be more affected by time and gravity. This is why a cubic meter of gold is affected by gravity more than a cubic meter of aluminum.

Synchronicity of electron vibrations
This is the tendency of the vibrations to synchronize due to magnetic bumping. This is otherwise known as heat equalization.

Heat transfer on the atomic level
There seems to be a synchronicity to electron energy. And the degree of synchronicity seems to determine how good a conductor of heat that particular element is. And given the clear link between the density of an element and its ability to conduct heat, we see denser packings of atoms as being more thermally reactive with one another, and that is why these denser materials are better heat conductors.

Heat and pressure
There's a rate of electron spin that corresponds to temperature. Higher temperature = faster spinning electrons. Faster spinning electrons = more bumping and either greater distance between atoms, or more pressure.

Friction
Friction is from lots of electron impacts under force. So the reason why impacts and friction produce heat is that some of the kinetic energy is turned into rotational energy in the electrons in the material.

Heat and atomic expansion
Is the expansion more from the atomic shells growing, or from them knocking into each other more? With gasses it is certainly the later, with solids it seems to be the former.

Why increasing pressure causes heat in gas
It causes the gas atoms knock into each other more and this knocks electrons loose, which produces heat.

Solid, liquid & gas connections
With solids, there are 3 or more connections to other atoms nearby. With liquids there are 2 connections and chains. With gasses there is 1 connection or no connection. If there is 1 connection, the atoms form

pairs, like O2. With gasses, the heat vibrations of the electrons vibrate the tiny nucleus so much that these elements only liquify at extremely cold temperatures. Otherwise the thermal vibrations break the substance into gasses

A model of phase change
My model for explaining phase change uses two familiar things.
Thing #1 is: A Mexican jumping bean, a bean with a lively worm in it. This represents the electron's thermal "vibrations".
Thing #2 is: A magnetic “bone” from a ball-bearing and magnet erector set. This represents the atomic bonds holding matter together.

But imagine that the jumping beans get more and more active with heat. And as they get hotter, they lose first their 9th, 8th, 7th, 6th, 5th, 4th, and 3rd lattice bonds (whatever if applicable) because these are such rigid bonds. Then the atoms bond with two bonds, or chains and exist as a liquid. Then they lose all bonds, or perhaps they keep a closed number of bonds and become gasses.

The reason why the smaller elements are gasses is that the worms are big and the bean light. In other words, the electrons heave the small nucleus around and make it more volatile and less likely to liquify or solidify except at very low temperatures.

If temperature rises above the solid to liquid phase change level, the jumping beans start breaking apart the lattice bonds. But the jumping isn't at first enough to affect the chain bonds because of the total flexibility of the structure (just like with the magnetic chains one can make with a magnetic erector set). These only get fragile after they get long.

Then when the temperature rises above the liquid to gas point, the boiling point, the jumping beans even break apart from the bones. Also, to be clear, the bones are not physical things, but energy bonds.

What are these bonds?
What causes the liquids if not chain bonds? What are these bonds? And how can anyone dare say anything about the sub-atomic level if they can't explain how these basic atomic level functions work?

Super cold super conductors
Apparently super conductance occurs when the electron lattices are so slow and still that electron conveyance can happens without any rotational energy waste.

Electron flow & magnetism
Most of the characteristics of heat conductivity, electrons flow and impedance seem to fit better with floating magnet electrons in an array than high speed orbiting electrons.

Annealing & metal fatigue
If we bend a wire over and over it will at first grow stiff and then it will break unless it is annealed. Also, first metals glow a bit (in the dark) and then they anneal. Silver glows at 650°C , and then anneals at 760°C and then melts at 962°C. (With iron it is 450°C, 500°C, and 2,800°C). But the atoms are not being moved by annealing, just allowed to re-adhered to the lattice.

hotter materials have higher impedance
Heat clearly impedes current flows. Maybe the vibrations slow electron passage. Or maybe time is needed for the electron shell to rotate and pass the extra electron on the other side. And if we put too many electrons through they tend to collide and go off course and create heat.

Melting a copper electric fuse
If we put too much electricity through a fuse wire, electrons go sideways and the metal gets hot and melts, and the circuit is broken in a weak point where it will only damage the fuse.

Power Line loss
If we pass a current through a metal at annealing temperature, can the metal be made more conductive?

What happened to the planet that was in the asteroid belt?

Earth, Mars and Venus are sister planets
1/ Both planets (and Venus) emit volcanic gas that is about 96° CO2 ±1°, not counting water from surface contamination.
2/ Mars rotates once every 1.03 Earth days.
3/ Earth has an axial tilt of 23.5°, Mars 25.2°.

There is water all over our solar system

Solar system bodies with a density over 3g/cm

Planet	Density	
Mercury	5.4	can't have water
Venus	5.2	can't have water
Earth	5.5	has water
Earth's moon	3.3	can't have water
Mars	3.9	has water
J-moon Io	3.5	can't have water
J-moon Europa	3.0	has water

Bodies with a mass under 2g/cm

Jupiter	1.33	unknown
J-moon Ganymede	1.94	has water
J-moon Callisto	1.83	has water
Saturn	0.69	unknown
S-moon titan	1.88	has water
S-moon Rhea	1.24	has water
S-moon Dione	1.5	has water
S-moon Tethys	1.0	has water
S-moon Iapetus	1.0	has water
Uranus	1.32	unknown
Neptune	1.64	unknown
Pluto	2.0	unknown

12 oddities of our solar system

1/ A planet seems to be missing in the asteroid belt between Mars and Jupiter. This is the natural location for a planet. Instead there is an asteroid belt.
2/ Mercury exists in an orbit that is not supposed to have a planet. Mercury's orbit also does not match the plane of the solar system.
3/ All planets orbit within 3.5° of the plane of the ecliptic (solar system) except Mercury which is at 7° and Pluto which is at 17.2°. Not being co-planar suggests that these “planets” were late additions to the solar system.
4/ Tiny Pluto has 7,000 times less mass than either of its neighbors Uranus and Neptune. This is why its status as a planet is so often questioned.
5/ Pluto's orbital path crosses Neptune's orbital path.
6/ Mars, next to and "down wind" from the asteroid belt has the 4 largest topographic features in the solar system. These seem to be the result of 2 punch through collisions.
7/ The entire solar system is heavily cratered.
8/ Mars is encrusted with both debris craters and slightly higher elevations on its southern hemisphere (search "crustal dichotomy").
9/ Earth has a huge 'oversized' moon and this moon is also encrusted with craters on its 'highlands', on one side. Earth is so geologically active that we would not know if it was once encrusted with craters. Although Earth's highest continent, Antarctica points in the same direction as Mars' highland heavy side.
11/ Venus appears to be encrusted with debris craters on one side.
12/ There is water all around our solar system, and most bodies capable of holding water have water.

A single cause theory for these 12 oddities

Here is a single cause theory for these 12 oddities of the Solar system. It may be a bit of a stretch in some places, but it seems to generally work. Let’s imagine that Jupiter at some time either picked up an outer moon, or simply had an outer moon we will call BULLET. However, Bullet was moving too fast, and its orbit was growing. And because of the sun's secondary gravity, Bullet’s orbit was being pulled and stretched towards the sun. So, over time, Bullet's orbit became increasingly elliptical, and elongated in the sun's direction. Then after some time, Bullet developed an orbital conflict with the planet that was previously in the asteroid belt, a planet we will call SPLATTER

Now splatter was probably a thin-skinned magma balloon like earth. So when it collided with bullet, the debris field was a hot and molten spray that looked much like the asteroids we see in the Asteroid belt — irregular objects shaped like a congealed spray that hardened in a gravity-free vacuum. At least the smaller objects with minimal gravity looked this way. The larger objects had sufficient gravity to reform as spheres.

Today, the asteroid belt has approximately 7% of the mass we would expect from a planet. So it would appear that at around 93% of Splatter's mass wound up sprayed somewhere else. And this is not including the mass of Bullet.

Much of this material surely fell or spiraled into the sun. And the greatest amount (the short spike) would have happened in the first days and years. Then over the eons, the amounts would have slowed considerably and gone "long-tail". Here it is easy to imagine Mars sweeping through the sun-bound spray shortly after the impact. This is where the pockmarked (and raised) Martian highlands came from; from a single enormous shower of debris that came after the collision. Also, around this

time, Mars struck one and then another large clump (solid or liquid) from the impact. These large clumps of relatively stationary debris punched right through Mars which was traveling at somewhere around 74,000-kph relative to it. This resulted in Mars' 4 great topographic features.

87,000-kph (Mars orbital velocity
—13,000-kph (Jupiter orbital velocity)
74,000-kph (relative speed)

Now the present axis of Mars is misaligned for this today. However, planets are know to change their axial rotation. So it appears that over the eons, the imbalanced Mars planet re-oriented with its heavy debris-field side facing its source of secondary gravity, just like Earth did. Secondary gravity thus slowly re-oriented Mars so its "highlands" (the part of Mars encrusted with water-rich deposits from the meteor shower) were pointing in the same direction as Antarctica and the plane of the solar system. This also changed the orientation of the two punch-throughs.

Here we note that Earth's moon and Mercury also have one side that is heavily pockmarked, and with "highlands". And Venus has a somewhat pockmarked side. This leads to the conclusion that all these bodies experienced the same thing as Mars to varying degrees. All of these bodies seem to have passed through a single and highly concentrated field of debris that was falling directly into the sun.

The collision of Bullet and Splatter also seems to have resulted in at least one object striking Earth. There is a hotspot suggested by the chain of geographical features that runs northeast from Sao Tome and Principe towards Lake Chad in Africa. And the Hawaiian islands also seems to be another hotspot. Here the entry and exit hotspots seems to have remained in one place, while the tectonic plates moved over them for around 500 million years judging from their location and the sea floor spreading rate. Anyway, given the unlikeliness of large objects from outside the solar system striking any planet today, and the apparent 'youth' of these features, they may have all been from this single collision between Bullet and Splatter.

Now the surface of Venus also dates to 550-500 MYA. And there was also a flurry of moon impacts dated to around 400 to 600 million years ago. This time also roughly coincides with so-called Cambrian Explosion of around 550 million years ago, when multicellular life began here on Earth. So the timing of the Cambrian Explosion perhaps implies that multi-cellular life, (or more likely) single cell life that was from a multi-cellular planet and multi-cellular ready, may have come from Splatter, a planet that seems to have been covered with water — life's byproduct (judging from all the water all around our solar system, and especially and peculiarly on icy Europa).

Here we note that the Splatter planet was farther from the sun than Earth, so if the early sun was much hotter, Splatter would have developed a temperatures cool-enough for life much faster than Earth. So here apparently is where all the water (life's byproduct) in our solar system is from.

Bullet shoots Splatter
Bullet probably blew right through the liquid-filled planet

Bullet was probably heading back to Jupiter
This explains the moon distribution
1/ The 79 moons of Jupiter
2/ The 62 moons of Saturn
3/ The 27 moons of Uranus
4/ The 14 moons of Neptune
5/ The 3 moons of Mercury, Venus, Earth & Mars.
6/ The water all over the outer solar system.

Collisions as a knock-on effect
Bullet as a moon of Jupiter was part of an earlier planetary collision in our solar system.Then over the eons, the sun stretched Bullet's orbit into an orbital conflict with Splatter. Then that collision caused another debris storm that tailed off for eons. Here we see the collision based aspect of orbital decay and eventual re-absorbtion. We also imagine that in the early solar system/ universe, this activity was much higher.

The day the solar system changed
One day, some time after Bullet had passed the point where it was closest to the sun and was arcing back towards Jupiter, it hit splatter at

around 74,000-kph. The result was a debris field of five main components:
1/ Material blown outwards, away from the sun.
2/ Material that fell right into the sun.
3/ Material that spiraled in towards the sun.
4/ Material that spiraled away from the sun.
5/ Material that stayed in place, and is still in the asteroid belt. Supposedly, this is only about 7% of the mass of an object we would expect to find here.

Splatter was a living world
If we accept that water is life's byproduct then all the water of our solar system (outside Earth) might be from the oceans of splatter. When the planet was destroyed, its oceans mostly got picked up by dead worlds and moons. This is where Mars' ice is from.

Highlands to the south
When Jupiter's loose moon hit the planet that was in the asteroid belt, one or both might have exploded. The Martian highlands seem to have been covered in slower orbiting material as Mars swept through the debris field once. And we presume that by the following year, the debris was say 98% diffused, or picked up by the sun. Due to geological activity, we wouldn't know if Earth passed through this debris field, although the moon sure looks like it did.

https://www.space.com/something-strange-inside-neptune.html
Neptune also has a volcanic "southern" hot area like Earth
This corresponds with Earth's antarctic ridge ring.

Punched right through the planet
There are 3 instances that I can think are examples of when a planet seems to have been punched though (1 on Earth, and 2 on Mars). I think these makes a remarkable statement about how planets are little different from high-speed space ships striking stationary debris at say 110,000 kph, (Earth's orbital velocity). Apparently the material just passes right through if it is big enough, and if the impact is direct.

Direct hit vs. pick-up collisions
Everything orbits the sun. Some things go fast and some slow. But everything is mostly going in one direction due to the orbital energy from the impact that created the solar system in the first place. So if there are any small objects in decaying orbits swirling into the sun, then these tend to encounter the edge of Earth's gravity well first. Then they sort of fall into the gravity well from its edge. And in this way they develop this decaying orbit swirl around the Earth. Thus they hit the Earth a a very oblique angle.

How dead Mars is
At 18,000 ft, air on earth contains 50% of the effective oxygen of air at sea level. On Mars the atmosphere has 1% of earth's pressure and no oxygen. The planet might as well have no atmosphere at all for all the help that 1% of atmosphere will bring. That isn't a useful atmosphere at all. Mars is a far-away, worthless dead rock that has no atmosphere.

Why Mars is dead
The 4 largest geological features in the Solar system are on Mars. These look like they came from punch-through collisions. And these look like they have drained Mars of most of the planet's entrained gas. The pressurized gas bled out, and left the planet geologically inactive. Thus little of the inner gas and heat of Mars can leak out to warm the planet's surface. And thus there is no atmosphere.

Earth's hotspots
On Earth, we clearly see two hotspots that have been passed over by the lithosphere for tens of millions of years and have left irrefutable geological tracks. These hotspots are now under Hawaii and Sao Tome. So it appears that if the impact object is small enough, it will not cause the space ball to completely de-gas. Or maybe one shall punch through produces a goldilocks de-gassing halfway between Venus and Mars. And two punch throughs result in a Mars like degassing.

Mars autopsy
The atmosphere of Mars is 1% of Earth's density. It is a non-atmosphere, and a dead world that cannot sustain life. The reason is that Mars was struck twice with large objects producing the 4 largest surface features in the solar system. Thus Mars was almost completely degassed. So with Mars, we can see that the threshold for degassing and killing a planet is far lower than the threshold for resurfacing it.

Enough with Mars
1/ Did we find any evidence of life yet?
2/ Mars has 1% the atmospheric density of Earth. We might as well colonize the moon for all the benefit the Mars atmosphere will bring us.
3/ It is super cold on Mars, like -63°C reported as a common temperature.
4/ The atmosphere is just like Venus and just like new volcanic air on Earth. If there was any life on Mars, we would expect a dent in the CO2 percentage. That the atmosphere of Mars is 95.3% CO2 and the atmosphere of Venus is 96% CO2 doesn't really seem like enough.

They oxygen of Callisto & Europa
Neither moon has much of an atmosphere, but they do have free oxygen. Now while water can be from elsewhere and from long ago, the oxygen can't. It eventually reacts away and tails off. So if we are looking for life, we would be wise to look where we can find more than a trace of unreacted oxygen in the atmosphere.

Cloudy planets are the norm
It is definitely worth considering that Earth is the only planet we know of that has a transparent atmosphere. There are 5 planets with cloudy atmospheres: Venus, Jupiter, Saturn, Uranus, and Neptune. And everything else has no real atmosphere to speak of.

Sulfur deposits near a volcano
This speaks of oxygen picking the hydrogen off the hydrogen sulfide. Given that the gas coming out is 96% CO2 and almost totally non-reactive, nearly all the hydrogen gets out to react with oxygen in the air to make water.

I don't believe in space exploration yet
I think it is a waste of energy at this point of human evolution. I think there are far more important things to work on. Orbital stuff is fine. Gravity and time probes are fine. It is just the manned Mars vacation that seems like a huge waste of our energies. I think we have more important things to do on earth.

Using nukes to deflect meteors
Using nukes to power space ships
Using nukes as space weapons
All of these silly ideas show how stupid people are about nuclear detonations. All nukes do is instantaneously raise the temperature of a few kilograms of material to millions of degrees. In an atmosphere, the atmosphere suddenly expands. However without an atmosphere, there is no sudden expansion. There is just heat. So all of the three ideas here above are stupid.

We will leave Earth behind
I believe man will leave the realities of planet earth behind, but I don't thing we will actually go anywhere else. I think we will become totally immersed in an artificial reality of our own creation and imagination right here.

Https://edition-m.cnn.com/2019/09/20/world/venus-habitability-scn/
Venus was never habitable
The above link is garbage. Space bodies do nothing but cool and dissipate energy over the long run, unless they get hit. Antarctica was once tropical. Venus was never habitable.

Terraforming Venus
Maybe we can introduce some extremophile bacteria to Venus that will eat the CO2 and convert it to water and calcium carbonate. Maybe this will drop the atmospheric pressure and temperature over time. Maybe we can get Venus to the blue green algae stage over some millennia.

Plutarch, d. 120AD, On the Contradictions of the Stoics, 44
"beyond the world there is an infinite vacuum, and that this infinity has neither beginning, middle, nor end."

Plotinus, d. 270AD, 3.1.1
"We hold that the ordered universe, in its material mass, has existed forever and will forever endure.

Cicero d. 43BC: On the nature of the Gods 2.118
"The philosophers of our school believe that in the end... the whole universe will be consumed in flame... From this divine fire, a new universe will then be born and rise again in splendor." [This obvious idea has been supported by the media for thousands of years.]

Lucretius, On the Nature of the Universe, c. 60BC, 1.1000
"The universe has nothing outside of it to limit it. There is therefore a limitless abyss of space, such

that even the dazzling flashes of lighting cannot cross it in their course, racing through an interminable tract of time. Nor can they even shorten the distance still to be covered. So vast is the scope that lies open to things far and wide without limit in any dimension."

Star Trek, Next Generation TV show, episode 124
[Here is the ever logical android named Data. Funny how the Spok is saying something that pretty much directly contradicts what I say. Some lies tell the truth with great clarity.]
"A highly respected scientist considered a visionary. He advanced several time-related theories. One regarding the relationship between time and gravity was quite intriguing. But neither that theory nor any other received wide acceptance."

Lucretius, On the Nature of the Universe c. 60 BC, Bk 2.80:
"If you think that atoms can stop and by their stopping generate new motion in things, you are wandering far from the path of truth. Since atoms are moving freely through a void, they must all be kept in motion either by their own weight [inertia] or on occasion by the impact of another atom." [This predates by 1700 years the work of Isaac New•ton or Mr. 'New•big', the man (with a matrix name) who was gloriously defined by the Apple dictionary as the 'single greatest influence on theoretical physics until Einstein'.]

Lucretius, On the Nature of the Universe c. 60 BC, Bk 2.96:
"Atoms never rest in their course through deep space. They move incessantly, but variably. Some of them rebound far apart after a collision, while others rebound only a short distance from the impact. Those that do not recoil far, and are held in a closer union. These, by the entanglement of their interlocking shapes, give us firmly rooted [formation] rock, and the stubborn strength of steel. Those others [the other atoms] that move freely through larger tracts of space — few and far between, springing far apart and carried far by the rebound — these provide for us the thin air and blazing sunlight. Besides these, there are many other atoms at large in empty space that have been thrown out of compound bodies..."

Lucretius, On the Nature of the Universe, c. 60 BC, Bk 2.310:
"Although all atoms are in motion, their totality appears to stand motionless, except for such movements as particular objects may make with their own [whole] bodies. This is because the [size of the] atoms all lie far below the range of our senses. Since they are themselves invisible, their movements must also elude observation. Indeed, even visible objects, when set at a distance, often disguise their movements. [For example] Often, on a hillside wooly sheep as they crop their lush pasture, creep slowly onward, lured this way or that by grass that sparkles with fresh dew. And the full-fed lambs gaily frisk and butt. And yet, when we gaze from a distance, we see only a blur — A white patch stationary on a green hillside."

Lucretius, On the Nature of the Universe c. 60 BC, Bk 4.142
[Let us now consider] "the speed and ease that filaments [light waves] are generated and ceaselessly stream out of objects, or reflect off their surfaces. For the surface of all objects is always ready to reflect them. When this [the light] comes in contact with other objects, it may pass through, as it does in particular through glass. When it encounters rock, or wood, then it is promptly scattered, so that it cannot reproduce an image. But when it is confronted by something both polished and solid, in particular a mirror, then neither of these things happens. The filaments [of light] cannot penetrates, as they do through glass; nor are they scattered, because the smoothness guarantees their safety. That is why such surfaces reflect images that are visible to us. No matter how suddenly or at what time you set any object in front of a mirror, an image appears. From this you may infer that the surfaces of objects emit a ceaseless stream of flimsy tissues and filmy shapes [filaments]. Therefore, a great many filaments are generated in a brief span of time, so that their origin can rightly be described as instantaneous. Just as a great many particles of light must be emitted in a brief period of time by the sun to keep the world continuously filled with it, so objects in general must correspondingly send off a great many images in a great many ways from every surface and in all directions instantaneously. You can turn a mirror any way you wish, but all objects are reproduced in it..."

Lucretius, On the Nature of the Universe c. 60 BC, Bk 4.177

"Let me now explain in my verses [this was written in verse, like a rock and roll song, not in prose, the language of logic.] how fast the filaments [light waves] move and how they swim rapidly through the air [the firmament of the filaments], so that a brief moment is spent on a long journey, whatever direction each one may take in response to its particular motivating force. ... it is commonly observed that light objects and those composed of small particles are fast-moving. A notable example is the light and heat of the sun: These are composed of minute atoms which ... lose no time in shooting right across the interspace... Similarly the filaments [waves of light and heat energy] must be able to cross an incalculable space in an instant of time.... [because] the light and heat of the sun are seen diffusing across the whole sky... flooding the sky, at the very moment of daybreak ... ... [Lucretius then gives a second proof and says] Here then is proof upon proof that objects emit [or reflect] particles that strike the eyes and cause sight."

Cicero, On the nature of the Gods, 1.73

"What part of his philosophy doesn't come from Democritus? Even if he introduced some variations... for one part his theory is identical: Atoms, a void, images, the infinity of space, the numberless universes, their birth and death, and so on." [Old and rather obvious speculations.]