

Bright Black Holes and Bright Dark Matter

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Abstract

Black hole (BH) event horizons can appear to us as black, or bright. Electromagnetic radiation (EMR) in frequencies we detect cannot overcome a BH's net incoming push/shadow gravity streams which establish the virtual horizon. Inside are also highly energetic photonic strings with much higher frequencies and shorter lengths beyond the resolution of existing spectrographs. If our modern science could register all of the radiating higher frequencies, we would quickly discover that black hole horizons can appear as very bright beacons. Sub-Planck dimensions outside event horizons also host high-frequency Dark Matter (DM) photons, which are individually bright, but sufficiently diffuse in space clouds as to appear less luminous.

Just because science cannot yet experimentally detect and/or verify something reasonable, it does not mean the projected "something" does not, or cannot, exist. Ignoring the logical possible can be an error rooted in disgraced logical positivism.

We are not talking about absurd math fantasies such as the 10^{500} multidimensional universes in some beloved versions of string theory, notably M-Theory. We are talking about logical extensions of ordinary physics adjacent to both ends of the electromagnetic radiation scale (EMR) that we would like to think we understand. Even if experimental science cannot yet verify phenomena beyond either end of our detectable logarithmic dimensions, unseen physics dimensions remain consistent with the convenient models that our current verification supports.

There is currently great interest within academic astrophysics around the seeming mysteries of dark matter (DM), and the deep darkness of black hole horizons. There have been some good efforts to explain it all in quantum gravity terms, if not in GR brane terms. Emerging quantum sea models of today are partially correct, but constrained by myopic theoretical errors. This confusion is easily clarified within the better paradigm.

The Photoelectric Spectrum

Let us first revisit that which we can see, and maybe could detect with our evolving technological tools:

The EMR spectrum begins on the high-energy side with many frequencies far smaller than we can detect. Max Planck decreed that his "Planck length" was about 10^{-35} meters small. Below that tiny dimension science cannot fully resolve anything with the usual photon detectors. Some have assumed we cannot conceive of classical physics at a smaller scale. Thus emerged the partially correct concepts of quantum mechanics and quantum field theory.

Toward longer frequencies of the EMR scale, the astrophysics model of our local universe being equal to THE universe emerged even before we saw that our neighboring Andromeda galaxy (M31) was actually a giant galaxy, not a mere nebula. We are now at 2022, not stuck back at 1915. For example, the great instruments of LIGO and the JWST were not even fantasies in

1915. Much excellent EMR experimental science has been done in the interim, which gives physics philosophers enough space to confidently speculate about the 4D universe of universes, the all-inclusive multiverse.

The Elemental Nature of Matter and Energy

The ancient Greeks got it right when they defined an atom as the smallest unit or element of undivided nature. Their logic helped them envision what their vision could not. Since then we moderns have expanded the original Greek model to embrace atoms as atomic units or clouds that can be divided into, at the very least, protons, electrons, and quarks. All of this complexity is added to even smaller realms of quantum phenomena, where divisions are uncertain or unprovable.

Nevertheless, logic compels us to look for the real elemental atoms, and we now know how and where to find them. String theory, though flawed, inspired me to envision energy/matter objects composed of elementary 3D beaded strings. Think of these beads as like Greek atoms, and their beaded strings as like beaded molecules. String theory fails in the real world when modeling with two dimensions, or even one brane dimension.

The real physical world is four-dimensional. It has Newton's three dimensions of length, width, and height. It also has the fourth dimension of vectors. Where there is mass, vectors will have mass in motion, or kinetic momentum. All physics reality, from smallest to largest, has four dimensions. Smallest units dialectically combine to populate the largest dimensions.

It is therefore proper to begin with the very smallest unit of matter/energy: the yin/yang sphere. These somewhat elastic spheres often adhere to each other in beaded strings to create real 3D strings where energy and matter coexist, and from where gravity and electromagnetism (EM) emerge.

Their fourth-dimensional linkages are where everything gets interesting: Individual yin/yang spheres can express in context negative, positive, and neutral/primary (cohesive) EM. They express individually and collectively any combination of matter and energy. They have simultaneous causes and effects. When they adhere as beaded strings they are together attached with great cohesion, considering their size and mass. Photons are vectorized "molecular" strings we can detect, or not, depending on spinning frequencies. They are bosons, typically emitted among larger dimensions from baryonic fermions.

Frequencies are a product both of length of beaded strings AND the centrifugal rotating frequency of individual strings escaping their kinetic graviton bases of origin. Graviton bases for primary assembly and subsequent releases can be another string, or a loop, a hollow or solid sphere, or any emergent mass of cohesive yin/yang particles. [*Real gravitons are not the same as string theory gravitons.*]

All ultimate units that we detect as energy/matter are the product of enough yin/yang particles simultaneously collecting and interacting to achieve logarithmic size scales that we instrumentally can measure through known energy frequencies.

It has been known for some time that the speed of light in a vacuum is a constant we call "c." There is a reason for this same number everywhere: The process of releasing vibrating strings attached to their base always yields "c." I have clearly explained this *snap-back elastic model* elsewhere. To know physics is to know this basic process: Click on [this link](#); also click on [this link](#).

The physics of brightly glowing event horizons is *not* the same for streams of detectable glowing plasma revolving just outside event horizon boundaries. Outside has opportunities for incoming baryonic matter to transform into visible plasma, and flash into brilliance before it streams into its proximal black hole horizon.

Baryonic matter's emitted bosonic photons that we can detect are typically too low in frequency, and too long in string lengths, to ever escape intact from within their event horizon, short of certain quantum-like radiation events at the horizon itself. More likely, these so-called Hawking radiation events are just common examples of escaping high-frequency photons mostly from fragmented long strings.

Consider that portion of the [electromagnetic spectrum](#) we can detect, both visually and with instruments. On the lower energy side are long frequencies toward the infrared, such as those the James Web Space Telescope will access. On the opposite side where ultraviolet, X-ray, and cosmic radiation exist, the photonic strings are much shorter and energetic, down to very short EMR strings of the highest energy.

All human instruments can collectively access only a small percentage of what's out there, and nothing shorter than cosmic rays from outer space, or gamma rays. Neutrinos by comparison represent a transitional phenomenon:

Here below is some [key information](#) from an important essay regarding what's going on inside black holes, regarding their gravity and luminosity from very high frequencies:

“Science already knows how solar neutrinos at 10^{-24} m each are EM-neutral, and thus they can easily zip through baryonic masses such as the Earth itself. Our own bodies are penetrated by trillions of neutrinos each second, all without apparent effect. Similar penetration occurs when much smaller yin/yang particles in far larger numbers encounter masses, ranging from our fleshy bodies, up to BH cores themselves, or at least their surfaces and outward within each event horizon.

“By way of comparison, consider that yin/yang particles are individually in the realm of 10^{-37} m; and neutrinos are in the realm of 10^{-22} m, possibly 10^{-24} m. That solar means neutrinos are 13 to 15 logarithmic dimensions larger – and yet they can easily penetrate entire rocky planets.

“Atoms are at 10^{-14} m, and adult humans are at 10^0 m. In brief, the logarithmic size ratio between yin/yang particles, and similarly mass-penetrating solar neutrinos, is equivalent to the dimensional ratio between atoms and humans!”

Gamma Rays and Neutrinos

Consider energy frequencies found in the most extreme cosmic and gamma rays, next down from X-rays: The most powerful such rays are also those with the highest frequencies, which means that their short photonic strings spin at higher than visual frequencies. Still, those frequencies are not high enough to escape the great net “gravitational pull” from within an event horizon, which means we are still looking at apparent blackness.

Here is an excellent, but not perfect, [description of cosmic gamma rays](#):

“A gamma ray (g) is a packet of **electromagnetic energy (photon)** emitted by the nucleus of some **radionuclides** following **radioactive decay**. Gamma photons are the most energetic [*sic*] photons in the electromagnetic spectrum.

“Gamma rays are a form of **electromagnetic radiation (EMR)**. They are similar to X-rays, distinguished only by the fact that they are emitted from an excited nucleus. Electromagnetic radiation can be described in

terms of a stream of photons, which are [*not*] massless particles each traveling in a wave-like pattern and moving at the speed of light. Each photon contains a certain amount (or bundle) of energy, and all electromagnetic radiation consists of these photons. Gamma-ray photons have the highest energy in the EMR spectrum [*that we know of*] and their waves have the shortest wavelength.”

The question arises as to what type of frequencies would be needed to have sufficient energy – and sufficiently small size – to penetrate and *escape the net push/shadow gravity flows* that will defeat longer frequencies and masses from escaping the virtual boundary of each BH horizon. EMR that we understand which is held captive, and *not* even detected by our external instruments, yields by its observational absence the stark apparent blackness.

The Universal Speed Limit

The [universal speed limit](#) has been found to always be “c.” This convenient letter obscures a deep mystery that has been deftly avoided by puzzled astrophysicists, but is critical to our understanding why black holes are brilliant, and so are dark matter energy areas throughout our local universe.

The speed of light is close to $c \equiv 299,792,458$ m/s. So far unanswered by physicists is just how this carefully measured number for all electromagnetic waves in a vacuum occurs omnidirectionally. The clear answer is both simple and profound:

The answer that fits this puzzle involves the relationships among individual yin/yang, matter/energy spheres when they adhere and accrete into beaded strings – AND next when they are vibrated off parking-and-assembling bases as separate rotating (waving) electromagnetic photons.

The key to what happens lies in the *elastic potential* of each sphere. Normally they exist in the most energy efficient shape, which is a sphere. However, when they are aligned through primary cohesion, each sphere is doubly adhering to each other, except for the one proximal sphere attached to its graviton base.

At the proximal point of attachment there is one cohesive attachment to its graviton base. Almost every other attached sphere along each 3D beaded string has two cohesions. The exception is the distal yin/yang element which vibrates at a sufficiently lower frequency and also remains attached with no even more distant spheres exerting centrifugal force. Because double attachments are twice the strength of a single cohesion, each string remains indefinitely intact, whatever its length.

The most important lesson to be learned is that all yin/yang spheres have the same primary EM at any point of cohesive attachment. They are also identical in primary size and mass. They are equally somewhat elastic while vibrating and spinning, without any later addition of energy to the string that could break it into two shorter lengths with higher-frequencies.

Where whipping accelerations produce more momentum than the cohesive resistance at the graviton's base attachment, the entire string of elongated beads escapes together in a rotating "wave" with a unique photonic frequency. Tumbling EMR waves composed of vast numbers liberated in one event are similar to oceanic waves involving water molecules. They all rise up and down, and propagate linearly, until affected by other passing or intercepting EM strings.

As I have previously explained, each cohesive sphere within a beaded string can stretch into something shaped like an American football, or rugby ball. At the very moment when each whipping string is sufficiently energized centrifugally the break occurs, and *ALL of the stretched particles simultaneously snap back toward spheres at the same rate. That contraction rate and launching speed is exactly "c."*

This model leads us to improving on the classical $E=mc^2$. The energy potential is equal to mass times the speed of light squared. However, this old formula does not immediately make sense under all theory assumptions: If there is no mass and inertia, then the released yin/yang spheres could release instantly with no speed limits, which is absurd, given that there would also be zero EMR. Literally, if the "m" within $E=mc^2$ were to be zero, then the E also would be zero, and the entire formula would fall apart. [In the older Newtonian version, $F=ma$, if mass=0, then the force needed for any rate of acceleration would be 0 too, which is equally absurd.]

The synchronized contraction of all elongated yin/yang particles at each moment when the proximal particle releases from its base takes a very tiny, and precisely uniform, amount of time, which I call "T." Because of the tiny distance and time, experimentalists have what is needed to compute the variables for how long this return to spheres from particle "footballs" takes.

Therefore, the correct vacuum formula is $E=mc^2/T$. This "T" stands for the time it takes for the snap-back synchronized bead contractions to occur. It is a small unit of real time, but not zero. That is because rest mass has inertia. Given this inertia/time factor, it is therefore shown that EM strings of any length have kinetic mass. At any rate, we are OK to keep the original formula in place, with the understanding that all string snapback time and distance units (T) are identical, yielding the resulting "c" velocity.

How Short Photonic Strings Escape Event Horizons

Because of the universal law of conservation of energy and matter, shorter yin/yang EMR bead strings will have less inertial mass. These shorter strings will at launching spin at a higher frequency. Longer strings that we can detect either visually or with our instruments travel at the same escape velocity in vacuums as do very short unseen strings, but have less frequency

energy. It is their less energy and larger physical profile that keeps longer EMR trapped inside any event horizon.

Electrically neutral solar neutrinos easily pass through the Earth, and indeed trillions of them zip through our bodies every second. It is one thing to penetrate an object of Earth's mass and density. It is another to escape the virtual gravity prison within a BH event horizon, and we have no evidence either way. However, as noted above, the size difference between individual yin/yang particles and their shortest strings, versus single solar neutrinos, is on the order of nearly fourteen or fifteen logarithmic dimensions. My guess is no, they cannot escape BHs.

We have discussed BH gravity, and how individual gravity units, essentially clouds of yin/yang particles and very short strings, can breeze through event horizons as if they were hardly there. It is unknown if any single yin/yang particle or string could penetrate the hyper-dense mass at the BH center. My guess is likely not, but it hardly matters, since nearly all space within a black hole's event horizon is distal from the highly compressed central mass.

If the central mass had nearly infinite density, a near-point dimension, then no y/y particle could directly penetrate it, but would likely avoid it short of a direct hit. On the other hand, if so-called "quantum push-back" keeps the central mass at a slightly larger diameter, it could be possible for a single y/y particle or very short string to navigate its way through the horizon, if it were not absorbed before exiting.

Thus, the question of a BH's central mass' size and density has very little, if any, relevance to the question of horizon luminosity.

Bright Dark Matter, and "Dark Energy"

Dark Matter (DM) is not dark for those portions of the EMR spectrum composed of very short EMR strings. We only need to

invent instruments to directly or indirectly detect those smallest frequencies and their luminosity.

Real DM should not be confused with dark baryonic matter found in many otherwise visible nebulas. Ordinary dark matter is, like dirt and dust, merely the presence of clouds of detectable matter that are not electromagnetic strings. Real undetectable DM and baryonic dark clouds commonly coexist as mutual gravity zones throughout our visible universe.

Hypothesized [Dark Energy](#) is *not* an extension of real DM. DE is not a viable alternative to multiversal push/shadow gravity, and to local universe expansions also involving clouds of yin/yang elements. DE, imaginary as a separate force, cannot emit any luminescence at any frequency, even while real DM can and does.

It is of note that the emerging idea of 4D “quantum clouds and quantum seas” is much closer to the dynamic composition of the omnidirectional multiverse – versus the merely correlative math of General Relativity and its imagined gravity branes.

When individual yin/yang particles are considered as quantum units in the quantum sea – and within omnidirectional multiversal flows – kinetic quantum gravity is revealed to be somewhat related to push/shadow gravity as classically described.

IN SUMMARY: Consider how elementary energy/matter spheres at the 10^{-37} m scale combine to create EMR building blocks within all larger logarithmic dimensions, for energy, baryonic matter, and universal gravity. All known 4D physics phenomena can be traced back to these ubiquitous yin/yang quanta spheres and to their dialectical multiples. What else is needed to begin forming a real and viable theory of everything?

