Light Reflection and Mirrors

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Abstract

Light reflection off flat silver surfaces is commonly witnessed. For such everyday purposes the angle of light incidence equals the angle of its direct reflection. In this classical specular reflection model discrete photons in frequency waves apparently bounce off the metallic surface. In contrast, for deep cosmological research with huge reflector telescopes the classical model can be deficient. Physicists know that real apparent reflection is an example of electromagnetic quantum mechanics involving atomic absorption of received photon quantum energy, with emission of new photons from atoms within the reflective surface. Opportunities for clever deception at the highest levels may appear when just ordinary results from deep-sky experiments are reported as great cosmic discoveries.

For over two decades I have quixotically worked toward updating today's widely believed neo-Ptolemaic version of physics.**[1]** We all are now deep into the 21st century, yet much of what is hypothetically accepted goes back hundreds of years. Just because slippery pure algebras have been invented, there has yet to be made a case for the primacy of idealistic Platonic pure maths everywhere over the basic 4D logarithmic physics of dialectical matter/energy.

Einstein decided four physics dimensions were enough to build his General Relativity spacetime model. Some more recent stringy, 2D models require vastly more mathematical universes to satisfy their absurd equations. Real physics does not need the noise of M-theory's ten to the 500th power alternative universes. Just because fantasy stringy equations can only be "solved" after modeling so many math universes, this alone does not prove anything about any thing.

Cinematic 2D math fantasies allow instant time travel to the future and the past; black and white worm holes; and the lack of 4D deep space. Also on the menu are 2D black-hole event horizons' inner realms hosting vast captured holographic mass/energy. Such models may be good for science fantasy pretending to be science fiction, but not for 21st century real science**.[2]**

Experimental classical science likes to work within logarithmic physical dimensions that we can probe, which may or may not overlap with proximal math dimensions. The real problem occurs when eager scientists try to fit square math plugs into round physics holes. We can never model all the *unknown unknowns* without elegant causative physics paradigms we can structurally envision. This necessary *real math framework* is why an elegant Theory of Everything is now required to supersede fantasy neo-Ptolemaic paradigms.

Current strategies for dealing with our inability to experimentally measure extremely tiny dimensions make sense only inside absurd maths. Employing *tricky scientific logical positivism* that excludes as "meaningless" what we might eventually measure is also absurd. When infinitudes and infinities are encountered, the trick has been to *renormalize* equations until they correlate with dimensional data.

Geometric maths starting with Euclid have utilized *virtual points* without apparent dimensions, being only a place for lines to anchor or intersect. Problem is, virtual physics zeroes are not equal to real physics zero. Also, real physics does not go down to zero dimensions, except for rare cases such as the creation of new local bubble universes.**[3]** Real physics demands 4D dimensionality, so that we avoid zeroes times any number always equaling zero.

The solution is to realize that "virtually" zero dimensions do exist as "points" hosting 3D Coulombic electromagnetic yin/yang spheres near the negative 38 meters (m) linear dimension. By comparison, we can now only image sub-atomic objects to the negative 18 m dimension; and "detect" ghostlike solar neutrinos at negative 24 m linear dimension, which the standard model treats as math points. That's a massive fourteen metric linear dimensions larger than single yin/yang spheres, and still much larger than most photonic 4D strings.

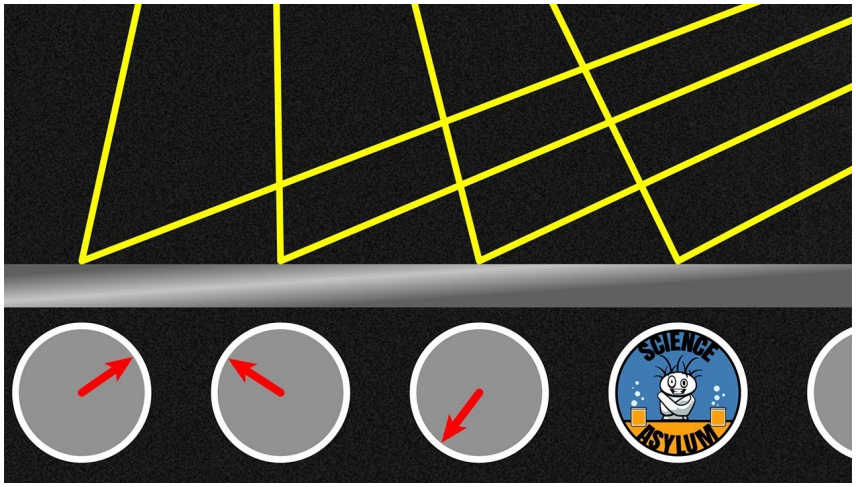
Let me state this logarithmic relationship another way: Earth penetrating neutrinos are logarithmically 14 linear dimensions larger than individual yin/yang spheres. Individual humans are 14 linear dimensions larger then individual atoms — which are themselves about 24 dimensions larger than individual y/y spheres. Just because we cannot experimentally measure individual yin/yang spheres, does not mean they don't exist within the correct TOE paradigm.

Here therefore is the core reason for why all neo-Ptolemaic models need fusion with real physics at all linear dimensions, from single yin/yang EM spheres to the outer edges of the multiverse. For the record, even an elegant multiversal TOE cannot extend precisely measurable dimensionality up to real infinity, as I have previously explained. However, we can model "multiversal infinity" using total Coulombic magnetism within the TOE.**[4]**

Astrophysicists obsess with achieving experimentally high-sigma results for Newton's gravity constant, even though it is rarely needed to solve most questions short of large distances. Even when SR and GR maths are used to tweak results, such as GPS coordinates, to correlate with better data we are still doing reverse-correlation, not causation. Math tricks do not equal physics wisdom, even though sometimes they can help.**[5]**

Here below is the gateway to a valuable *YouTube* video from a weirdly wise quantum physicist regarding *how mirrors really work*. Just click on the image to view this video. We learn how photons are not just waves such as Doppler sound, or ocean waves. Photons are 3D electromagnetic quanta (EMQ) that travel in rotating beaded strings as EM photonic waves. Their *wave power* is a function of their string *wave lengths and spinning frequencies*, with higher frequency waves having the higher energies, and of course different colors within our visible frequencies.

If you watch this video casually, you might initially keep the idea that individual photons interacting in waves with mirrors are the same ones that reflect classically and travel onward. Astrophysically, this is not so with at least two telescopic mirrors inside reflector telescopes of all sizes, plus other mirrors in associated instruments. This key design configuration can have great consequences.



The dialectical construction path from individual yin/yang EM spheres, up to the outer vast multiverse itself, is not as random as one might suspect. If all were a random process, there could also emerge a rapid descent from orderly negentropy into terminal thermodynamic equilibrium (entropy), literally from negentropic order to *energy chaos*. However, negentropic complexity has a way of persisting within the "bubbles multiverse" for many billions of years. On our local bubble universal scale we are nowhere near in time or space to ultimate thermal equilibrium, derived from the Second Law of Thermodynamics. Only the right TOE explains this self-correcting big picture.

We are aware that very energetic, short EM waves can penetrate massive things, even the Earth itself. Solar neutrinos, for example, zip through the Earth as if it were not there. Much shorter photon strings are able to penetrate black hole event horizons as if they did not exist. Larger black hole *cores* can also be penetrated more easily than the smallest cores, due to lower high-mass densities with less juxtaposed EM *pushback* effects at granular yin/yang dimensional levels.**[6]**

What we observe as reflections on a metallic mirror only involve waves in our narrow visual frequencies' range that are able to interact with ordinary atoms. Much *higher and shorter energy frequencies,* such as neutrinos, may pass through ordinary mirrors, and even through great masses such as thick layers of lead. *Longer and lower energy frequencies,* such as LIGO's misnamed gravity waves, are too long to bounce and interact with individual atoms**.[7]** This choice of which frequencies to examine is why the James Webb Space Telescope

has a gold-surfaced mirror, rather than a silver surface such as found in the Hubble, and in large telescopes on places such as the Canary Islands. The involvement of many string frequencies within natural light only complicates models of quantum entanglement.

In 2018 an experiment was conducted by Big Astronomy using the two adjacent large reflectors on mountains in the Canary Islands. There is nothing special about that location. The same experiment could have been carried out with the dual Keck instruments and a "supersymmetry collection box" in between. The Canary location tried to prove there is no 3D space between quasars several billion light years away from us, and billions of light years apart from each other.

Without a third and fourth physical dimension, it could be possible in time to holographically store everything inside fuzzy event horizons of black holes — yielding the end of fourth dimensional time, thus preserving the conservation of energy and matter in a most strange way — or so the ultra-popular Stephen Hawking believed at his death. That's another tail wagging the dog. Of course, his fans deposited Hawking's cremains between those of Newton and Darwin.

In the same vein of questionable species intelligence, the very great Wolfgang Amadeus Mozart was tossed into a pauper's grave, and nobody knows where it is. Of course, Austria now has a fancy Mozart festival every year. Obscene ironies like this exist everywhere on our planet. What should any hovering or cloaked space aliens really think about us as a species? **[8]**

The great quasar experiment of 2018 failed. What these physicists thought they had clearly proved with this one experiment was photon entanglement and supersymmetry on a great 2D cosmic scale. What was actually demonstrated was *as-if supersymmetry between new photon signals exiting from mirrors inside the two telescopes*, then sent to a single collection box a few meters between the great mirrors.

On September 25, 2018, just after these prominent astrophysicists reported on August 20, 2018 **[9]** their interesting dual-quasar supersymmetry results within their holographic model, I uploaded a clear analytical essay on their failure.**[10]** In 2022, four years later, the precious Nobel Prize for Physics was awarded to them.

References

[1] https://astronomy-links.net/LightSpeed.pdf

[2] https://astronomy-links.net/Time.travel.pdf

[3] https://astronomy-links.net/physics.boxes.pdf

[4] https://astronomy-links.net/beyond.the.multiverse.pdf

[5] https://astronomy-links.net/big.gravity.pdf

[6] https://astronomy-links.net/BB.BHs.pdf

[7] https://astronomy-links.net/LIGO.and.GR.pdf

[8] https://astronomy-links.net/great.filter.theory.pdf

[9] https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.121.080403

[10] https://vixra.org/pdf/2010.0249v1.pdf