Is “Big Particle Physics” Dying?

By Clark M. Thomas

Abstract

Particle physics loves gigantic colliders. However, little of significance has been found since the Higgs boson a decade ago, and never the Holy Grail of supersymmetry. New multi-billion-dollar colliders and upgrades will only be modestly more powerful than today’s machines, and qualitatively questionable. Huge opportunities will be found in particle physics and astrophysics for those who would step off the theoretical gerbil path. Fresh paradigms could yield more scientific discoveries.

Physics in our early 21st century should be a long way from the exciting, romantic early 20th century. A century ago Nobels were handed out like candy for updated 19th century ideas from small laboratory experiments. Today’s competition reveals only the most extravagant results are usually considered. The so-called Standard Model was refined and correlated during the latter 20th century. Big Science now tries to challenge or update this old model, with no new logarithmic “standard” to offer. Gravity and the nature of quanta are among several unresolved challenges.

Big science chases big money with esoteric promises, even long after its failings have become more obvious. Boat loads of fresh physics PhDs have been trained to follow the gerbil path to success. Publish (if you can) heretical ideas, and you don’t get

your PhD. Physicists now crowd papers as "co-authors" by the dozens (and sometimes by the thousands, as with LIGO) trying to avoid academic irrelevance. Publish-or-perish flocking is why academic physics is increasingly absurd. Individual physicists are brilliant, but the majority with paychecks must look at the real world through antique keyholes.

This very month, June of 2022, saw the publication of a very necessary essay in *science.org*. The author, Adrian Cho, has a PhD in particle physics. His paper is *Ten years after the Higgs, physicists face the nightmare of finding nothing else*. [Please click now on the blue link in this paragraph to read Cho's essay.]

Very briefly, Dr. Cho fully appreciates the CERN Large Hadron Collider's (LHC) verification of Higgs bosons, which may or may not be a big deal. Even if it is big, there has been little else of big significance discovered since then, at the cost of several more billions of dollars. The latest upgrade is simply one of power, not of concept. This upgrade is thus one of incremental quantity, not paradigm-shifting quality. Supersymmetry itself still exists beyond the LHC, if it exists at all.

From a money perspective the end may be near, even if some juicy tidbits soon emerge from the nano-particle world. Our hot world is facing multiple financial and political crises at one time which cannot be ignored. We have to look back to the 1930s and 1940s to see competition for money this fierce.

In other words, collider Big Physics may have reached a major pause point, with seemingly nowhere to go except with more powerful machines within questionable theory.

Fortunately, there should be much room for progress within a causally correct and elegant paradigm embracing all physical logarithmic scales. How do we get to there from here?

Toward the New Particle Physics

The basic problem is not with the size of fundamental particles that we fail to observe and manipulate. Quantum physics has already identified that primary scale, even though all therein is weird within current theories. Causally understanding those logarithmic dimensions within which we can currently and directly evaluate particulate natures requires more than statistical hard correlation. It requires the proper guiding theory.

Classical particle physics verifiably operates above the Planck scale of 10e-35m. Much smaller linear dimensions are said by quantum theories to be quantized and unmeasurable fields, except from their collective dialectical effects at measurable dimensions. Current experimental science does yield practical value within the classical dimensions we can access, but not so much for deeply understanding our quantum foundations.

Briefly, scientists are looking at the physical energy world *as if* looking through a keyhole. The view of things on the other side of the keyhole appears like things on this side. However, such a narrow field of view cannot detect most of what's on the other side. What we don't see can be more important than what we do see. Nor can "keyhole physics" explain how all dimensions relate. How many fruitful astrophysics careers could unfold when collider physics emerges into a 21st-century physics?

It is not enough to assert quantum randomness exists below the negative 35th meter linear dimension. Keyhole perspectives on quantum theory from inside today's floating-castle walls rely on physics mysticism and dubious mathematical renormalization to deal with basic questions.

Warped ideas of dark energy and dark matter; of black holes; of vast numbers of string dimensions beyond the correct four; and so forth – all poison experimental physics itself. Even the study of black holes and their environments is poisoned by the

wrong paradigm of basic physics found inside the Planck level. A much better theory is needed, because just building a bigger keyhole is not qualitatively sufficient, even if quantitatively slightly better at high expense.

Speaking less poetically, the problem occurs from the very small portion of the full electromagnetic spectrum we access. Going from gamma rays to infrared seems like a lot, but these wave lengths represent only a tiny part of electromagnetism.

What appears to be accumulated quantum structures are all misunderstood classical structures. The famous Planck linear dimension of 10e-35m is merely another spot on the full EM spectrum – but still close in size to the fundamental yin/yang particles and their bead-particle strings and rings which begin at about the negative 37th dimension.

By comparison, we humans live near the positive first metric dimension – and the 4D multiverse itself may extend beyond the positive 27th metric dimension. That logarithmic distance means humans are mathematically closer to the deepest multiverse than we are to the smallest real logarithmic dimensions inside us.

I recently wrote about black holes that are also very bright holes. The apparent blackness comes from our inability to record very energetic photonic frequencies. Full-spectrum brightness is not the same as theorized white holes, which would mostly be all the spectrum colors we can see and measure.

Furthermore, one of the most significant results from the initial LIGO image, which has been minimized by GR theorists, is that there is no expected interdimensional spacetime wormhole within the great supermassive black hole in M87.

Highly potent exiting frequencies associated with very short EM photon bead strings, undetectable within today's instruments, has been improperly described as Hawking quantum radiation. In fact, the "escaping quantum radiation" is none other than much

shorter, spinning photons released at velocity "c" inside the event horizon – or traveling through one horizon to and through the opposite. Most of the new and very short EM beaded chains easily sprint out at "c" past the virtual shell we know. They shower the external environment with light waves much shorter than anything we can now measure. Thus, bright black holes.

It is logical to model that enough omnidirectional incoming multiversal yin/yang particles pressing inward could at some distant time prevent the emission of new BH core mass photons, leading to another core collapse and bounce-back into a future Big Bang. This extremely rare type of hyper push/shadow gravity is what caused our local universal bubble. This type of kinetic model is elegant, and more in line with experimental data than stale voodoo gravity sheets and random quanta.

Note that the extremely brief moment before any future big bang involving our local universe would be briefly preceded by a shrinking of the full-frequency event horizon to where its radius is everywhere juxtaposed to the core mass. Again, what we think of as the Schwarzschild radius only describes what happens to photon frequencies at or longer than what we can now record.

The fundamental units which we imagine are QT quanta are abundant, but not mysteriously random as conceived a century ago. These primary bits are most of what constitutes the so-called quantum sea that pervades all areas of our local universe. Ubiquitous quantum seas also populate other local universes, and to a lesser degree the spaces between and among universes.

This kinetic model is the REAL physics that our keyhole machines do not yet allow us to see. Only emerging realms of sub-nanophysics, and some astrophysical data from the Cosmic Microwave Background (CMB) give us hints of Reality, which at human scales appears classical. This "opportunity gap" between what we can experimentally do, and what we cannot do, allows for emerging quantum physics to construct superior models worthy of our emerging sciences.

Certain types of theoretical physics and astrophysics are confined to math fantasies, however correlatively consistent they are to a point. Grandiose ideas of vast numbers of dimensions beyond the proper four appeal to Hollywood science fiction fantasy, and to corrupt physicists such as Stephen Hawking.

Put the fictional Dr. Sheldon Cooper into that box too. It is ironic that later episodes of *The Big Bang Theory* show Cooper realizes his beloved string theory is a dead end; and then he is directed into the equally futile quest to understand Dark Matter and Dark Energy according to the wrong math. Of course, he and his new wife end up with a physics Nobel. Their mind journey is fictional, but it reflects the crumbling state of Big Physics today.

How can science make theoretical progress with our current tools of experimental physics? Ironically, the "way to is through" with the appropriate combinations of improved sub-Planck foundational theory, and incremental experiments. The proper perspective should allow science to refine understanding of such matters as Dark Energy, Dark Matter, black holes, the speed of light in a vacuum, the multiverse, and other puzzles that defeat antique defective ideas holding back modern theory.

There are always three basic logarithmic levels of experimental physics knowledge:

(1) The smallest yet most foundational components, currently unmeasurable;
(2) the keyhole realm of experimental science, which we think we can measure; and
(3) the distant realms, including the 4D multiverse, which is dialectically composed of the smallest components expressed on the grandest scale, and which produce real push/shadow gravity. This dynamic region includes both the parts of the EM spectrum we can see, as well as all other EM frequencies. The multiverse itself is likely unmeasurable with any known EM frequency.

It is my thesis that a correct understanding of the smallest physical yin/yang dimensions in Level One will help us model all three energy/mass levels. In contrast, currently popular antique models lead to confusion and frustration on all logarithmic levels, compelling the forthcoming minimal relevance of big colliders.

By understanding real causality, not just correlation, we can partially measure with astronomical instruments much that will assist second-level physics understand the first level. Proper experiments use induction and deduction – but with no 2D holographic voodoo, or math renormalization.

It is a corollary of my thesis that Big Physics would greatly benefit from a fresh and elegant model of the universe of universes, without invoking metaphysical deities or suspicious curving maths. New PhDs could better devote their brilliant minds toward modern dynamics that work, versus correlative gerbil paths that try to congruently prove GR and gravity branes.

I have provided a new perspective within my causal essays. Some of them are linked in blue herein. Great minds and experiments will be needed to fully correlate my clear concepts within an elegant physics ecosystem. The future of objective science at the end of our Anthropocene era deserves no less.