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No Big Bang, No Safe Black Holes: Please, Dear CERN, Start to Listen

Abstract

Two seemingly scandalous new results are brought to the reader's attention. The at first sight hilarious first (no big bang) is used to motivate the reader to also check the second (black hole unchargedness). If it is true that astrophysics went astray for 8 decades in a row, the currently running most prestigious experiment of history may conceivably involve an equally fundamental misconception in black-hole theory (as shown). A bet is offered that no scientific authority will find fault with either result. Hence an immediate moratorium is mandatory for the LHC experiment. The reader is invited to save, either the face of the globe's establishment by supplying the missing refutation, or else the whole globe by preventing its transformation into a miniquasar.

(July 3, 2010)

Two Claims

1: The theory of the big bang is based on the assumption that no first-principles prediction exists for the cosmological redshift phenomenon discovered by Hubble: This commonly held assumption is false, I claim.

2: The currently running super-experiment at CERN is based on the assumption that black holes lack the recently described properties of unchargedness and finite unfinishedness: This commonly held assumption is false, I claim.

I propose a bet with the reader – and the world – that my alternative explanation of the Hubble law described below will be globally accepted soon.

If you do not believe me – as I expect to be the case at this point – but I nonetheless succeed in convincing you about claim # 1 in the following, I trust you will give me the benefit of the doubt regarding claim # 2. I in this way gamble the fate of planet earth on my having disproved the big bang. Such a sporting offer can hardly be refused, or can it?

First Step: Proof of Claim # 1

Light gets "tired" on its long voyage through the cosmos, Hubble discovered in 1929. An ongoing expansion of the whole cosmos can explain the phenomenon if assumed as an axiom in defiance of energy conservation [1]. Expansion was for this reason never accepted by Hubble, an attitude which cost him his nobel. He always insisted on a first-principles explanation yet to be found.

This was achieved by Chandrasekhar in 1943 [2]. The prediction of a distance-proportional energy loss is implicit in his equations, although he did not draw the connection to Hubble in

his lifetime. His fundamental new result he called "dynamical friction". Dynamical friction takes away kinetic energy from a fast-moving object in a touch-free fashion (dynamically). Specifically, a fast-moving star traversing a cloud of randomly moving slower stars in a globular cluster gets braked [2]. This is what Chandrasekhar's 45 stochastic equations prove. But they also apply virtually unchanged when the fast-moving object is not a heavy star but only a planet or moonlet or asteroid or cosmic-ray particle or photon. This fact, explicit in his equations, went unnoticed. The transposition from many stars in random motion (globular cluster) to many randomly moving galaxies (cosmos) is straightforward.

The phenomenon was re-discovered independently (and more clumsily) six decades later in the context of the Hubble law [3-11] (with Perlmutter's bent included [9]). The priority of Chandrasekhar was pointed out to me by RamisMovassagh (personal communication 2006). No criticism made itself felt on the part of the scientific community.

Statistical calculations have a built-in weakness when it comes to convincing. This could explain the lack of resonance. More recently, however, the phenomenon could be reproduced in a deterministic 2-degree-of-freedom model chaotic system [10]. The simulation proves that statistical thermodynamics is accompanied by an equally fundamental sister discipline called "statistical cryodynamics" [11]. Cf. [12] for a premonition.

I do not expect my readers to believe me right away, especially since the most recent paper [11] has not yet appeared in print (I will make it available to any reader who requests it). But my prediction that everyone will make a laughingstock out of himself who in a few years' time still says "I believe in the big bang" stands firm. This finishes my defense of claim # 1.

Second Step: Proof of Claim # 2

Now comes the second part – your part. I challenge you to dismantle my statement # 2 after your having been unable to contradict my statement # 1. Is it true that black holes have radically new properties compared to what is believed up until now? Most every physicist would take an oath that a black hole that has eaten a charge (or an unequal number of opposite charges) will be charged. This is false.

A conservation law of physics of 150 years' standing cannot possibly be wrong. In particular, the famous Gauss-Stokes theorem of classical electrodynamics implies that electric field lines cannot be broken or attenuated. The traditional combined Einstein-Maxwell equation inherits this [12]. So the claim to the contrary, made by Rossler, proves that he must not be taken seriously (said Hermann Nicolai of the prestigious Albert-Einstein Institute for Gravitation Physics of the German Max-Planck-Society, severing communication).

As unlikely as this may appear, the standard picture is false again. The fact that charge is not conserved in nature can already be seen from the positively charged jets of protons emitted by the central engine of quasars. Why do I say that black holes annihilate charge? It is because they reduce the rest mass of any in-falling body or particle to zero. Charge, being interconvertible with an electron's rest mass, therefore goes to zero, too.

At this point, every specialist starts laughing: rest mass going down to zero at the horizon – what a nonsense! But this follows from Birkhoff's theorem. The theorem describes the empirical fact that the outside-felt gravity of a collapsing star remains the same as before the collapse. Hence the total mass-energy of an in-falling particle is invariant – despite the fact that its kinetic energy increases, becoming maximal as the particle reaches the speed of light

at the horizon. Hence rest mass (the other summand in the particle's mass-energy) goes to zero in the same limit. Okay, okay: but why is this fact not well known?

I would say it is the same thing as with Chandrasekhar's result: dogma prevailing over reason. But physics ceases to be a science if this happens at several points simultaneously? It could be a consequence of the fact that the educational system no longer encourages "naive" questions to be raised by the younger generation. The profession has become too homogeneous and hence high-brow. Recently, the zero-rest mass result was found independently by Cox [14]. This finishes my defense of claim # 2.

Discussion

Two foreign results were presented, one well published in cosmology [3-11], the other less widely published in black-hole theory [15-18]. The physics community is convinced that new fundamental results defying a many-decades-old consensus are a matter of impossibility. This confidence is at first glance comforting to see. But you agreed that you would give me the benefit of the doubt should I survive with my claim # 1. Therefore you will not contradict me now when I say in the wake of claim # 2 that black hole theory "is in a phase of rapid change." So rapid a change, in fact, that an immediate moratorium on the currently running ready-to-peak LHC experiment at CERN is vital. Vital to stopping the "blind flight" of a planet bent on getting transformed into a "miniquasar" [15].

I am far from fanning panic: all I demand is to have our results checked before further buttons are allowed to be pressed in the blind belief that our results are not worth checking. Medieval superstition combined with 20th century technology makes the 21st too dangerous an endeavor. A Khmer-rouge like phobia of science must not be fueled by Calvin's Geneva. Science is our most noble activity. Hence discourse must be allowed back. Barefoot science is science, too. If the two results described above (tired light, charge annihilation) survive the scrutiny of my readers, I dare pledge in the name of us all: "Dear CERN, please, start defending yourself in public rather than behind closed doors." Or is there a single reader to help me out of my trap of fearing to be right while hoping to be wrong?

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