# The "Bigbangaton" of Early HCE8S Theory Needs to be Replaced by Gauge Bosons for Fast Space Communication and metric Space Expansion

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Abstract: In the development of HCE8S theory it has become clear that the microwave background radiation is of lesser importance than the much more energetic dark energy components of metric space expansion and faster space communication. Accordingly, the "bigbangaton" gauge boson needs to be replaced with two new gauge bosons for which I propose the names "Cosmophoton" and "Metricon".

In preparing the latest update of cyclic universe E8 symmetry theory which I now call holographic cyclic universe E8 symmetry or HCE8S theory, I have come to realize that I need to downgrade the status of microwave background radiation to a more educational role of relatively minor total cosmic energy and upgrade the role of dark energy as a new form of greater energy cosmic radiation of potentially 137 X higher speed and also upgrade dark energy for its very important role in metric space expansion .

The new form of cosmic radiation has a photon I have called a "cosmophoton". The radiation power is $E/s = h_u \times f$, where f is the frequency in cycles/s and $h_u = 2 \times pi \times QU$, where QU is the quantum of the universe. QU at present[1] = 33.81238 GeV (33.81 to 4 digits). $2 \times pi \times QU = 6.28318 \times 33.81 = h_u =$ 212.4 GeV. We note the new cosmophoton appears to be responsible for dark energy radiation with a virtual energy/s equal to the mc^2 energy of the top quark (171.7 GeV my proposal). The cosmophoton appears in our own epoch as responsible for cosmos communication radiation[2] with a speed

137X that of light and the metricon appears as responsible for metric space expansion phenomena.

We noted in our last note that taking 4 digits for QU (33.81GeV) has an interesting consequence. QU/8 = $4.22625/(13.8/13.5)^{1/2}$= 4.22625/1.01105 = 4.1800603 GeV and comparing this value to the (probably correct) value of 4.180 for the mc^2 of the bottom quark, we get 1.0000144; very close agreement. We also observe that 33.81/32 = 1.0565625 x 1/100 = 105.65625 MeV. Taking the present mc^2 value of 105.658366 MeV for the muon, we get a ratio of 1.0000199; excellent agreement. Note also that for this calculation, we don't need the $1/(13.8/13.5)^{1/2}$ factor we did need for the bottom quark, i.e. , this indicates that for the muon lepton the present broken symmetry TF epoch is the only epoch it has ever known. The greater-than-4 bit mc^2 value is another indicator of the same condition; thus the tauon lepton, and the electron lepton join the muon lepton, but the three neutrinos act differently. They act more in a predictive mode (via mc^2 value). They also have TR. The quarks act similarly, except their predictive usefulness depend on quark flavor mc^2 energy ratios.

We next observe that deep space images show no nebulae glow between galaxies: this indicates that electromagnetic effects are absent at the largest universe scale. This in turn implies that quantum mechanics is not important at this scale, which is a scale at which Holographic Cyclic E8 Symmetric Universe Theory thrives. This also indicates that the cosmophoton gauge boson needs to replace the photon gauge boson and that the 8-fold color gluon be brought into the theory as a means of actually coloring space communication images in addition to a more familiar role as the strong force.

With these changes in gauge bosons we still have a total of 8 bosons for HCE8S theory; The 4 heavy bosons H, W+, W-, Z and the 4 weightless bosons (gauge bosons): the gluon, the cosmophoton, the fermiboson and a new gauge boson for metric space expansion, that I suggest be called the metricon.

1. George R. Briggs, “An improved energy flow diagram is shown for an HCE8S universe”, ViXra 1802.0399, (2018)

2. George R. Briggs, “Richard Feynman’s “magic number ”alpha is explained by holographic cyclic E8 symmetric universe theory”, ViXra 1710.0341, (2017)