A Revised and Improved Energy Flow Diagram is Shown for an HCE8S Universe

George R. Briggs

Abstract: A more complete and improved forward-time, reverse-time energy cycle of the 9th cycle of an HCE8S universe for a full loop of the cycle is shown

Using data taken from several previous notes[1,2] , I will show a time-energy flow chart for the 9th cycle of an HCE8S universe:

TR time reverse QU quantum universe TF time forwards
Unbroken E8 symmetry Broken, Holographic E8 symmetry
Entropy decreasing Entropy increasing
LElife energy BEbinding energy DMdark matter DEdark energy

HCE8S Universe:

ttH +ttZ +tH +tZ fermibosons - 4 H, - 4 Z, + 12 top quarks + 4 antifermibosons 12 top qk annihilation gamma radiation = 8 entities/galaxy-sec /galaxy-sec=4(H – Z) = 4QU

|| X (13.7958/13.5) = X1.0219159 |

* TR energy in >> {1370 GeV/ sec-galaxy} >> TF energy out |

^ Annihilated 6 top quark pairs DM -4H DM -4Z |

^ X10^3 sec 12X DE 172.51 GeV | | super- | |

^ TR (s + c) quark = 1370 MeV | | massive | |

^ c/s (1275/95) = 13.42 ~ | | black hole | |

approximate collapse age of 9th | |Higgs cancel | |

universe which did not happen | | ^+ 4H | |

(=13.50 billion years) | 4(H-Z) = 4QU^< | < |

^ TR s quark = 95 MeV | DM= -8Z |

^ LE=950-931.49=18.51MeV | | |

^ X10 TR^ X100 = 931.49 MeV > | TF proton>atom>star |

Basic matter: 2u, 1d quark~9.30 MeV| TR electron | |

Unbroken symmetry @ neutrino @ @

^ 12X DE 172.51 GeV @ 2.2x 10^-6 MeV @ @
^ << 4 x TR electron x 1.021916 < | < TR electron | QU
proton, antiproton pair (1863 MeV)| ^ neutrino | |
+ binding energy BE (47.2 MeV) | ^<2.2 x 10^6 MeV | |
^ 1815.8=1.0219159 x 1776.84 TR | 0.17 MeV | |
^ | TR muon | |
^ | neutrino | |
^ | X10^-6top quark | |
^ | | |
^ | 15.5 MeV | |
^ | TR tau neutrino | |
Big Bang << ^ << * X100 =1550 MeV | |
| >> 1776.84 Mev TR tau lepton * |
| + alpha x QU = 246.739 MeV |
DE becomes energy = 1796.739 MeV |
10X 172.51 GeV 2X 172.51 GeV + 18.51 LE = 1815.249/ |
| | 1.0219159 = 1776.3193 |
Metric | (1.000293 ratio) |
Space Universe Communication UC |
Expan + 7/1000 x QU = 0.2366866 GeV |
sion MSE | 33.81238 GeV QU < |
6 QU/1000 color black only 1/32=1.0566368 GeV |
1 QU/1000 color (QCD type) x1/100 = muon lepton |
universe communication << << =105.658366 MeV |
(1.0000503 ratio) |
|
33.81238 GeV x 1/8 x QU < *
= 4.2265475/$(1.021916)^{1/2}$ = 4.1809806 GeV bottom quark
$(1.021916)^{1/2}$ = 1.0108986 vs. 4.180 = (1.0002345 ratio).

We next consider a (t + b) type quark entity for metric space expansion. Consider

$(t + b + t_{holo}/200) = 172.51 + 4.180 + (1.19 \times 172.51)/200 = 172.51 + 4.180 + 1.0264345 = 177.71643$ GeV. Compare 1/100 this amount to the mc^2 energy of the tau lepton (1776.84 MeV). The ratio 1.0001825 is close to one: This shows the importance of this scenario: With it we have two ways of generating tau leptons:

1. Starting with Tau neutrinos: (100 x tau neutrino + alpha x QU + LE) x 13.7958/13.5 = tau lepton (MeV). Use this method for TR.

2. Starting with t and b quarks: $(t + b + t_{holo}/200)$ GeV = 100 x tau lepton (MeV). Use this method for TF.

I must next correct the value I used in my last note for h^{bar} to find the best new value of the QU. This is h^{bar} x 10^44 = 1.6896093 x (20 + alpha) + LE = 1.6896093 x (20.007297353) + 0.018.51 =33.823018 GeV (QU) +91.18762 (Z) = (Higgs) = 125.01021 GeV. This is only 1.0000816 above 125 and the latest published value (125.09 GeV) is only 1.0006762 above 125. The value of 125 is probably the best now (QU = 33.81238) until new data becomes available. Another possibly for H is 1.6896093 x (20.007) +0.019939 = 33.823952 + 91.18762 = 125.01157. For this, 9.315 (proton/100) x 2 =18.63 + 1 (electron + antielectron) = 19.63 MeV. 19.939 (1.0157412 larger) arises from tau lepton data. Note closeness with age factor 1.0219159. The LE is 95 x 10 Mev = 950 – 931.49415 = 18.50585 Mev + 1= 19.50585 MeV including the two electron mc^2 needed to form hydrogen atom-antihydrogen atom pairs.

Let us also consider the quantity 7 x QU/1000 = 0.23667 GeV further. This quantity divided by 172.51 GeV = 0.0013718 which is very nearly 10^-5 x smaller than the inverse of the

fine-structure constant alpha (1.0010508 ratio). This indicates that nature is trying to tell us that annihilation of two top quarks in the unbroken symmetry epoch era gives the same energy result as in our broken symmetry era and this means that space communication indeed requires 2000 sec per bit to travel across the universe at its maximum diameter.

My final Higgs mc^2 value of 125.01021 GeV is lower than the recently accepted value for the Higgs (125.09 GeV) by only a factor of 1.0006382. The E8 universe mc^2 energy remains at 1370 GeV /sec-galaxy, since only the top quark and Z particle mc^2 masses determine its value (12 x top quarks – 8 x Z's). The Higgs boson masses cancel out of the calculation through supermassive black hole action. The universe age factor 1.0219159 still remains, however, indicating the particle masses were updated (by whom?) at the scheduled collapse age of 13.5 billion years for the universe which did not happen.

The proton has recently been found to be a factor 1.007276466583 lower in mass, or 931.49415 MeV. Thus 950 – 931.49 = 18.51 MeV. This is the best value we have to date for the life energy LE. This is only 18.51 MeV/1370 GeV or ~ 1/100 x 0.1% of the total energy of the universe! This won't seem so terrible after you multiply by the number of active galaxies (10^27) and again by the number of seconds in 13.8 billion years (4.3549488 x 10^17) to find the actual total energy (4.355 x 10^44 GeV) to date and 0.01851/1370 = 1.35 x 10^-5 x 4.355 x 10^44 GeV = 5.88 x 10^39 GeV for LE.

The fact that two methods of utilizing the tau lepton have apparently been made use of in HCE8S theory points to the great importance the tau lepton plays in the design of the universe. The precision of the new method will now be tested[3]

further. As stated in this reference, 1.1706237 x (13.7958/13.5) = 1.1706237 x 1.0219159 = 1.1962789 and (t +b + (1.1962789 x t)/200) = 172.51 + 4.1802871 + (172.51 x 1.1962789)/200 = 1.0318503 + 176.69028 = 177.72213. This number x 10 and divided by 1776.84 = 1.0002145. This factor is no better than the factor 1.0001825 obtained previously and almost certainly means that t is too high. Better data is awaited but may be awhile coming with the LHC down for improvement .

1. George R. Briggs, “Holographic cyclic universe E8 symmetry theory indicates that Majorana neutrinos are unnecessary and that neutrinos are divided tau leptons ”, ViXra 1711.0325, (2017)

2. George R. Briggs, “The role of charm and strange quarks in holographic cyclic E8 symmetric universe theory”, ViXra 1712.0455, (2017)

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