An Improved Energy Flow Diagram is Shown for an HCE8S Universe

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Abstract: An alternate 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 (fast?) 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 |

Energy in >> {1370 GeV/ sec-galaxy } >> energy out |

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

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

(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^< | < |

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

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

^ X10 ^ X100 = 931.49 MeV > | > 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 @ @
^ | TR electron | QU
^ | neutrino | |
^ << << 4 x TR electron << | << 2.2 X10^6 MeV| |
proton, antiproton pair (1863 MeV) | | |
+ binding energy BE (47.2 MeV) | | |
^ 1815.8 = 1.0219159 x 1776.84 | 0.17 MeV | |
^ | TR muon | |
^ | neutrino | |
^ | X 10^-6 top qk | |
^ | | |
^ | 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 |
| | (1.000293 ratio) |
Metric Universe Communication UC |
Space | |
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)
(t + b) type quark for metric space expansion <<

I am showing an alternate flow diagram for an HCE8S universe which I think best fits the observations. Firstly, I think a number as important as the energy needed to make the whole universe function should be a whole number, in this case the mc^2 of 1000 x the sum of the s and c quarks, or 1370^3 Gev/galaxy-sec. If I make this change and then recalculate mc^2 for the electron, I get a considerable improvement in match: from 1.0002195 to 1.0000801.

I will next give the best new value of the QU. This is h^{bar} 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 is 1.6896093 x (20.007) +0.019939 = 33.823952 + 91.18762 = 125.01157/125 = 1.0000925. 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.

We next consider the tau lepton, which we consider as derived from the tau neutrino via TR flow. We assume the 15.5 MeV of the tau neutrino is first multiplied by 100 to 1550 and then (alpha x QU = 246.779 MeV) and LE (18.51 MeV) are added to it. The result (1815.289 MeV) is divided by the universe age difference factor 1.0219159 to yield 1776.3585 MeV. This differs from the published value for the tau lepton (1776.84) by only a ratio of 1.000271 and thus verifies this scenario as correct.

Let us 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 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[4] 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 possibility also exists that in unbroken E8 symmetry conditions reverse time itself passes 1/alpha times faster than

in our broken symmetry epoch. This enables us to calculate the total age of the 8 cyclic universes that have occurred as[4] 54 billion years for broken symmetry type and 54/137.035999 = 0.394057 billion for unbroken type, for a total of 54.394057 billion years: Quite a bit longer than theologians have thought!

I have now advanced HCE8S theory to the point where it can explain the mass reasonably well of all the particles in the universe: My job is essentially done. Note that no place in my work has required other than experimental data already available.

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. "Quark", Wikipedia, (2018)

4. "Precision study reveals proton to be lighter", Cern Courier, Aug 11, 2017

5. George R. Briggs, "Thanks to Bekenstein bound holographic phenomenon collapse of E8 symmetry cyclic universes can be prevented", ViXra 1708.0484, (2017)