72.8% / 22.7% Dark Energy/ Fermions = Mass 4 top Quarks/ Mass (H + Z) Bosons: Why?

George R. Briggs

Abstract: Annihilation of spin 0/spin 1 negative-energy mc^2 H and Z bosons generates dark "energy" of ½-spin character which produces simple expansion of space but requires 72.8% of our universe's energy production. The expansion of space reduces CM radiation loss beyond the universe. The 72.8% is entirely consistent with just 2 entities being disrupted, the ttH and ttZ fermibosons (processes) of an assumed broken E8 symmetry cyclic universe.

My letter[1] outlining a cyclic universe of E8 symmetry makes use of the 2 fermibosonic ttH and ttZ entities[2] for bringing matter from the previous universe into the present universe. Unbroken E8 symmetry permits production of spin 0 and spin1 negative-energy bosonic entities which can do the job. When the fermion transfer is complete, further negative energy matter becomes redundant and can be removed. This type of matter is becoming recognized as dark matter. Dark energy is not yet recognized as the annihilation product of dark matter[3].

The fermibosonic entities made in our epoch of broken E8 symmetry cannot be made with negative mc^2. Instead, the mc^2 energy is positive (this is what is observed at the LHC[4]): for negative mc^2 production we need the unbroken E8 symmetry of the epoch before the big bang. However, negative mc^2 matter for the bosonic component formed before the big bang may still be present in our epoch and can be usefully utilized to generate expansion of space and thus maintain big bang radiation at as low a frequency as possible to minimize energy loss from the growing universe in our epoch.

Assuming the fermibosonic entities were equally of spin 0 and spin 1 bosonic type ttH (spin 0) and ttZ (spin 1) processes[5], but had H and Z of both positive mc^2; for every Z+H = 91.19+125 = 216.19 GEV amount of negative bosonic matter lost by 2 annihilating negative energy particles, 4t = 173.34 x 4 = 693.36 GEV amount of fermionic matter is lost to dark energy. Note that a relatively large amount of fermionic mc^2 energy must be shed. This must ultimately be supplied from the

previous universe. Fermionic matter/dark matter = 3.21. This value of 3.21 agrees exactly with that observed[6] (72.8 %/22.7 % = 3.21) and shows that only 2 negative energy entities, the H and Z bosons are involved along with the top quark fermion and that the cyclic universe E8 symmetry theory must be used here.

1. George R. Briggs, "E8 symmetry universe theory: a step-by-step history", viXra 1505.0039, (2015)

2. Cern Courier, Apr 27 and Sept 25, (2015)

3. See Dan Hopper's website, recent experimental findings (2015)

4. Cern Courier, Apr 27 and Sept 25, (2015)

5. Cern Courier, Apr 27 and Sept 25, (2015)

6. Richard Panek, "The 4% universe", Houghton Mifflin Harcourt, (2011)