Dark Energy is Expansion of Space Generated by Annihilation of Spin 0/Spin 1 Negative-Energy Bosonic mass in Our Broken E8 Symmetry Epoch

George R. Briggs

Abstract: Dark energy is expansion of space generated by annihilation of redundant spin 0/spin 1 negative-energy mass in our after-big bang broken-E8 symmetry epoch in which new negative-energy matter is not possible. Expansion of space in this way minimizes big bang radiation energy loss outside the universe.

My letter[1] outlining a cyclic universe of E8 symmetry makes use of 2 fermibosonic entities for bringing matter, both fermionic and bosonic, from the previous universe into the present universe. Unbroken E8 symmetry permits production of spin 0 and spin1 negative-energy boson entities which shield ½ spin fermionic matter from the previous universe of fermibsonic type basically needed for the cyclic universe (having negative mc^2 bosons) to grow. When the fermion growth is sufficient, further negative matter becomes redundant and can be removed[2].

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): for negative mc^2 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.

How much annihilation of negative mc^2 matter can we expect to get from this source? Assuming the fermibosonic entities were equally of spin 0 and spin 1 bosonic type of ttH (spin 0) and ttZ (spin 1) processes[3], but had H and Z of negative instead of positive mc^2; for every 2Z=182.38 GEV amount of negative bosonic matter lost by 2 annihilating negative energy particles, (1+Z/H)4t=(1+91.19/125) x 173.34 x 4=1199.166 GEV amount of fermionic matter is lost to dark energy. Note that a relatively large amount of mc^2 energy must be shed.This energy must ultimately be supplied by the previous universe. Transfers of 2(H+Z)= (125 +91.19) x 2=364.76 GEV of fermionc matter, or (1199.2/ 364.76)=3.29 dark matter/fermionic matter. This value of 3.29 agrees well with that observed[4] (72.8 %/22.7 %=3.21). Note that baryonic matter/fermionic matter is only 4.56 %/22.7 %. This antimatter annihilation takes place almost certainly in the bright galaxy bar region.

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

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

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

4. Richard Panek, "The 4 % universe", (2011)