"Quanta of the Universe" Are Closely Related to Universe Matter Density and the Cosmological Constant

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Abstract: (H-Z) x mc^2 "quanta of the universe", universe matter density and the cosmological constant are all closely related to Planck's constant of quantum mechanics save for its time dependence.

We start by giving the value of (H-Z) = 33.81 GeV. We next convert this[1] to Kg/M^3. This is 33.81 x 0.0186408 x 10^-27 = 0.6302454 x 10^-27 kg/M^3 = closely 1/10 the value[2] of the universe matter density of 6.36007743 x 10^-27 kg/M^3. The number 6.36007743 is numerically close to Planck's constant except with the exponent -27. The Constant h in Kg-sec. is 6.62606 x 10^-34 (J – sec.) x 8.98755177 x 10^16, or with an exponent -11, which is -12 for the quanta of the universe. Thus the quanta seem to have been designed (by whom!) to be 1/1000 as large as -9. The exponent 9 plays an important role in the design of the average active galaxy: The average galaxy seems[3] to be contained in a cube 10^9 M on a side.

How is the cosmological constant involved in this? The constant is closely related[4] to the universe matter density and the density to the "quanta of the universe" value. This H-Z value, I predict, bears rather close monitoring in the future. Luckily, we have the LHC to help us out with this task. It behooves us to keep the accelerator in good working order!

I would like to end this note by bringing attention[5] to my late wife's connection to Vera cooper (later Rubin) through their both having taken courses at Vassar College's Astronomy

department, Vera in 1948, (of which we were both unawares) and my wife Barbara in 1951. I heard many similar accounts about Maud Makemson, her teacher also, which impressed both of us a great deal and eventually lead to Barbara becoming a considerable contributor to restoring the old observatory and paying for building a new one. This year, a peak year for me in scientific publication, would have been Barbara's 88th year, the same as Vera's last, had not cancer claimed her 3 years before. Several odd coincidences are apparent to me here!

1. George R. Briggs, "The latest value of the Hubble constant indicates a universe matter density higher than one hydrogen atom per cubic meter", vixra.org 1704.0404,(2017)

2. See above Ref.

3. George R. Briggs, "The critical fermion density of the universe found from cyclic universe E8 symmetry theory", viXra.org 1703.0310, (2017)

4. George R. Briggs, "The significance of the holographic and non-holographic versions of the cosmological constant", viXra.org 1705.0477, (2017)

5. Ashley Yeager, "Vera Rubin's universe", pp. 36-40, Sky and Telescope, August (2017)