

## Peculiar Signaling Properties of the Tau and Mu Leptons and W and Z Bosons and More

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Abstract: It is noticed that 4 of the known particle types (2 leptons and 2 bosons) show unusual signalling properties. The universe has also apparently cycled 4 times in its history.

Following a previous finding<sup>1</sup> that the best present value for the mass of the tau lepton is also very accurately the age of the last signing of the Declaration of Independence, I have also found that the mu lepton and W and Z bosons seem to have the same property of pointing out important historical dates. The Z (91.1876 MeV) seems to be pointing out the date<sup>2</sup> of the Battle of the Little Big Horn (1876) and the W (80.385 MeV) the date<sup>3</sup> the Book of Wisdom was called not a canonical but ecclesiastical book (385 AD). Finally, the date<sup>4</sup> of the extinction of the dinosaurs (66 million years ago) appears to match closely 100X the numerically fractional part of the mass of the muon lepton (105.658366 MeV).

In addition, I have noticed that if one assumes 125 GeV for the  $mc^2$  of the Higgs and the tau neutrino/ $\nu$  neutrino ratio =  $15.5/0.17 = 91.17647$ , the  $QU = H-Z = 125 - 91.17647 = 33.81353$  GeV and as I have done routinely<sup>5</sup> for my bottom quark calculations,  $33.81353/8 = 4.2266912/(1.0110134) = 4.180648$ , which gives 4.180 GeV for the correct 4-digit b-quark result. But it is hard to accept a 3-digit 125 MeV value for such a recently occurring particle as the H. Let us try 124.99 GeV as a candidate 5-digit particle instead: now  $124.99 - 91.1769 = 33.8131/8 = 4.2266375/(1.0110134) = 4.1805949$  GeV, which still gives a correct 4-digit result.

I have made another finding. In view of my recent earlier discovery of the mysterious dimensionless constant 1.0000055 in connection with the neutron and proton, I have found that the same constant enters in connection with the number of cyclic universes that have occurred. As a result I have determined that the number of cyclic universes has been very likely 4; not 8 as I originally thought. Let us list the ages in billions of years and particle digit number and type for the first four most recent universes:

13.5 - 4-digit particles (t , b , c , Z tetraquark) - - continuation of 13.5 - 5-digit particles (H , W) - 6-digit particles (Z , tau)  
 11.95 3-digit particles (0.511 MeV electron, tau neutrino)  
 10.4 2- digit particles (electron neutrino, mu neutrino)  
 8.85 1-digit particle (0.5 MeV electron)

The sum of the ages is  $44.70 \text{ TF} + 0.04 \text{ TR} = 44.74$  billion years and the exotic constant associated with this number is 1.04474. The square root of the number is 1.0221252 and  $1.0221252 \times 13.5 = 13.79869$  is close to the original age of the universe (13.799 billion years). The dimensionless ratio of these last 2 ages is 1.0000224 and  $1/4$  this ratio is 1.0000056 - viola! - very close to my earlier mysterious dimensionless constant associated with the neutron/proton.

1. George R. Briggs, "The tau lepton mass (1776.84 MeV) signals the completion of the signing of the Declaration of Independence", Vivra 1808.0231, (2018).

2. "Battle of the Little Bighorn", Wikipedia.org, (2018)

3. "Book of Wisdom", Wikipedia.org, (2018)

4. "Cretaceous - Paleogene extinction event", Wikipedia.org, (2018)

5. "An 8th HCE8S flow diagram improving the Z(4430) tetraquark connection", ViXra 1806.0465 (2018)