

The Heavy Neutrino Leads to an Accurate Critical Value for Hubble's Constant H_0 of 78.20 Vs. 74.03 (Km/s)/Mps for the Latest Measurement

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Abstract: A highly accurate critical value of Hubble's constant of 78.20 (Km/s)/Mps) has been found including the 4430 MeV heavy Majorana 4th neutrino.

I have improved the accuracy of my critical $H_0 = 78.16$ (Km/s)/Mps calculation¹ by including the sum of the masses of the 3 light neutrinos. This new total mass is $4430 + 15.5 + 0.17 + 2.2 \times 10^{-6} \sim 4445.67$ MeV and $13.36 + 4.44567 = 17.80567$ GeV. From this we calculate $17.80567/13.36 = 1.3327597 \times 8.62 = 11.488388 \times 10^{-27} \text{Kg/M}^3$ for the new critical density. Now the square root of $1.3327597 = 1.1544521 \times 67.74 = 78.20$ for the more accurate critical H_0 . Now the latest² and most accurate data $H_0 = 74.03$ (Km/s)Mps, which is only 4.17 lower than the critical H_0 . Since 4.0 was **natures** probable intended difference between the two values, $0.17/74 = 0.23 \%$ indicates an accuracy well $< 1 \%$.

1. George R. Briggs, "Thanks to the heavy Majoranic neutrino collapse of the universe is avoided". ViXra 1903.0357, (2019)

2. Adam G. Riess, Stefano Casertano, Wenlong Yuan, Lucas M. Macri and Dan Scolnic, "Large Magellanic cloud cepheid standards provide a 1% foundation for the determination of the Hubble constant and stronger evidence for physics beyond AlphaCDM", Space Telescope Science Institute, (2019)