**Report on the Evaluation
of Chapter 6
in
"The Grand Unified Theory of
Classical Physics"
by Dr. Randell L. Mills**

Prepared by

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Executive Summary

In my analysis, I verified calculated values and equations involving the stability of atoms and hydrinos found in Chapter 6 of the book "The Grand Unified Theory of Classical Physics" by Dr. Randell L. Mills. I replicated and verified many calculated values and equations throughout the chapter. In Table 6.1, I verified all the values found in the columns. Overall, in the course of these calculations for Chapter 6, I replicated his values and calculations to a very high degree of accuracy.

Purpose

The physics being described in this chapter is the stability of atoms and hydrinos. He addresses which states radiate and which ones don't and finds conditions for which ones radiate and which ones don't.

He makes connections of disproportionation reactions of hydrinos to smaller and smaller radii to dark matter and the radiation from the interstellar medium. He also connects disproportionation reactions to gamma-ray bursts and gamma ray emission of neutron stars.

Another question Dr. Mills addresses is "How small can the distance be between an electron and a proton"? This depends on the new "ground" state found in the hydrino atom. The smallest orbitsphere and the lowest-lying level are determined due to the limiting speed, which is the speed of light. This places a limit on the quantity p. Dr. Mills finds that $p \leq 137$.

Next he derives equations involved in the spin-nuclear and orbital-nuclear coupling of hydrinos.

Dr. Mills also calculates the spin-flip energies and frequencies of different hydrinos in Table 6.1. He calculates a value of the Einstein A-coefficient for the hydrino H(n=1/2). And he calculates an intensity for spin-nuclear and orbital-nuclear coupling transitions of hydrinos.

Calculation

I have verified as correct equations 6.1-6.4, 6.9-6.10, and the equations and values they produce for equations 6.11, 6.12, and 6.14.

I showed that equations 6.13 and 6.15-6.21 were correct.

I also showed that equations 6.22-6.29 were correct as written.

Also correct were equations 6.30-6.32, 6.34, and 6.35. Also the equation and value in equation 6.37 were correct.

In Table 6.1, given the energies listed in the Energy column, I successfully verified all of the values in the Wavelength, Wave Number, Energy Values, and Frequency columns. All of my values in these last three columns agree exactly with the ones reported in Table 6.1. (I discovered that the Wave Number column uses $1/\lambda$ instead of $2\pi/\lambda$.)

Conclusion

I was able to verify the CP results of Chapter 6 in very good to excellent agreement with my own calculations. I was able to replicate the derivation of Dr. Mills' equations to an excellent degree of accuracy and to confirm his calculated values in the chapter. I was able to successfully verify all the entries in Table 6.1 as being correct. I find these results to overall be confirmation that the calculations included in Chapter 6 are both valid and reproducible.