

Abstract Submitted  
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**Quantization Of Temperature** PAUL OBRIEN, No Company Provided

— Max Plank did not quantize temperature. I will show that the Plank temperature violates the Plank scale. Plank stated that the Plank scale was Natures scale and independent of human construct. Also stating that even aliens would derive the same values. He made a huge mistake, because temperature is based on the Kelvin scale, which is man-made just like the meter and kilogram. He did not discover natures scale for the quantization of temperature. His formula is flawed, and his value is incorrect. Plank's calculation is  $T_p = c^2 M_p / K_b$ . The general form of this equation is  $T = E / K_b$  Why is this wrong? The temperature for a fixed amount of energy is dependent upon the volume it occupies. Using the correct formula involves specifying the radius of the volume in the form of  $(RE)$ . This leads to an inequality and a limit that is equivalent to the Bekenstein Bound, but using temperature instead of entropy. Rewriting this equation as a limit defines both the maximum temperature and Boltzmann's constant. This will saturate any space-time boundary with maximum temperature and information density, also the minimum radius and entropy. The general form of the equation then becomes a limit in BH thermodynamics  $T \leq (RE) / (\lambda K_b)$

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