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A Black Body Radiation Law in a Gravity Free Vacuum
CLARENCE A. GALL, Postgrado de Ingenieria, Universidad del Zulia, Apartado #98, Maracaibo, Venezuela — The interpretation of black body radiation in terms of Planck's quantum hypothesis in 1900 largely defined the science of the twentieth century. Einstein was one of the vocal few in opposition to this approach because it led to the rejection of strict causality in science. He sought without success a solution of the radiation problem without light quanta, a problem he viewed as incredibly important as well as difficult. His approach appears to have involved 'the energy principle.' This paper proposes a solution to this problem that is considered to meet Einstein's criteria. It uses an apportioning function developed on the basis of Einstein's energy-mass principle ($E = mc^2$) that distributes the total thermodynamic Stefan-Boltzmann energy over the entire wavelength range. This black body distribution function $\left(I_\lambda d\lambda = \frac{\sigma T^6}{w^2}\lambda e^{-\frac{T}{w}\lambda} d\lambda\right)$ also results in a new temperature scale with units of reciprocal wavelength, which unifies the thermodynamic and colour scales.

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