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Abstract:

In physics, giving a symmetry group is entirely equivalent to fix natural laws (Noether's theorem). Within such a framework, the symmetry group that leaves Maxwell's equations invariant appears to be $ISO(4,2) \otimes U(2) \otimes U(2)$. The two numbers 4 and 2 affecting the Inhomogeneous Special Orthogonal group symbol (ISO) suggests that, taking into account the existence of light besides matter, our universe has 4 = 3 + 1 space-like dimensions and 2 = 1 + 1 time-like dimensions. We have recently [1] proposed that, as music is characterized by a scale-invariant symmetry operation (transposition by octaves) and that as time may be perceived differently in shamanic trance for instance, the two additional dimensions of our universe may be related to music and consciousness. Related to the fifth dimension as music, it has been proposed to adopt a new A4 = 429.62 Hz value based on universal physical constants of our universe and on the mass of the water molecule H_2O , "The most abundant and cohesive heteronuclear molecule in the entire universe". Demonstration will be done that this new diapason is superior to other diapasons based on frequencies of 440 Hz or even 432 Hz. Implications for health (both physical and mental) as well as for music (consciousness or subconsciousness) will be discussed.

Reference:

[1] Henry, M., Bridoux, S. (2024). Symmetry, Music and Water. J Huma Soci Scie, 7(3), 01-25.