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Dark Matter Frequency in Complex Space

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Abstract*. In this note we propose that Dark Matter belongs to the complex space of the exceptional lie Algebra E6.This is why it has not been observed, but does have a fundamental frequency f .*
Key Words*: E6, Equiharmonic Lattice, Quarks, Hessian Polyhedron.*

I. Introduction

In a recent paper on 'What are Quarks' [2] it was proposed that quarks belong to the imaginary axis of the graph of the Hessian Polyhedron E6 with 3 real and 3 imaginary axes. This is depicted in Fig.1 below, where the imaginary vertices representing the 3 up and down quarks u,d that make up protons and neutrons and their anti-particles are in the outer circle; leaving the inner ring for leptons and strange particles with the heavy τ^{+-} and ν_τ particles in the center. Fig. 1 is actually a projection E_6/ F_4 and is the subalgebra $(su_3)_{color}$ x $(su_3)_{spin}$ x $(su_3)_{isospin}$. This figure was authenticated by the employment of Theta Functions which are essentially a rotation in a space with one real co-ordinate K and one complex co-ordinate iK which are linked by the exponential nome q of the ratio $\frac{iK}{K}$ that are quarter periods on the real and imaginary axes.Particularly if these are equiharmonic , or multiples of a commonfrequency f. Then q=0.06583=exp $\frac{\pi iK}{K}$ or $\frac{iK}{K} = \frac{\sqrt{3}}{2}$ = sin 120° or sin 60° (1)

Which is precisely the angle in Fig. 1 that defines quarks and anti-quarks in an equiharmonic lattice [3,Ch.4]. In this way the E6 lattice of Fig. 1 defines a coupling constant uniting up and down quarks and the fundamental frequency f could be electromagnetic in 3space or Dark Matter frequency in complex space which, according to Arvanitaki [1] of the Perimeter Institute, may be almost audible resonating in the kilohertz range. If Dark Matter is in complex spaceCP^3 then this would explain why it is not seen.

References

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[2]. J.A.de Wet, What are Quarks? IOSR-JM , Vol. 13 (2017)
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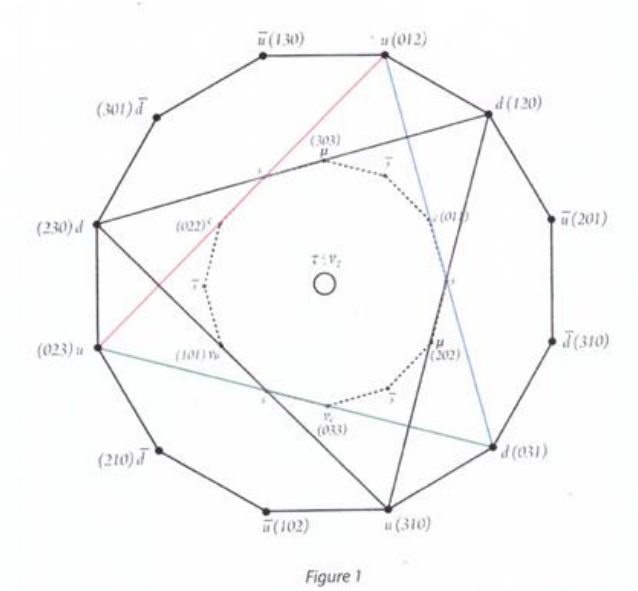

Figure 1

Figure Captions

Figure 1. Caption of figur