Postulate 1

Problem to be solved

Many postulates means a lack of fundamental understanding (so where do these many postulates come from?). So why not just make the simplest of all possible postulates of 1 and have ultimate understanding?

Problem solved

But 1 is more than just a written squiggle on a piece of paper. 1 must at least have algebraic definition ($z=zz+C$ (1.1)). Here $C\equiv C_M/\xi$ where C_M is the Fiegenbaum point.

Definitions

Postulate 1: Our algebraic definition of 1 is: $z=zz+C$ (1.1), since $1=1X1$. Note we omitted the identity mapping $1z=z$ so no other z's. So this postulate1 implies several constraints such as $\delta C=0$ (1.2) since 1 is a single invariant, $\delta z<<1$ (so C is small) in $z\equiv 1+\delta z$ since we postulated only $z\approx 1$, and the resulting eq.1.14 (See derivation below). A compact way of writing all these constraints (which also makes 1 a real#) is simply $C=C_M/\xi$ (ξ large). Proof in appendix C

Derivation of eq.1.9-1.16 from eq.1.1&1.2:

So plug δz (=z-1) into equation 1.1 and get $1+\delta z=1+2\delta z+\delta z\delta z+C$ and canceling the 1 and rearranging $\delta z\delta z+\delta z+C=0$ (1.4)

Solving eq.1.4: $\delta z=[-1\pm\sqrt{(1-4C)}]/2$. So for noisy 1 real $C>¼$ in general $\delta z=dr+idt$ (1.5)

(So we derived `space-time.`). Plug 1.4 and 1.5 into eq. 1.1 $\delta C=\delta(\delta z)+\delta(\delta z\delta z)=0$ (1.6)

For $\delta(\delta z\delta z)=\delta[(dr+idt)(dr+idt)]=\delta(dr^2+i(drdt+dtdr)-dt^2)$ (1.7)

At C_M spike $\delta(i\delta t)=0$ (stability) in 1.6 so the Imaginary part of eq.1.6 is $\delta(drdt+dtdr)=0$ (1.8)

If dr,dt positive then $drdt+dtdr=ds_3=0$ is a minimum. Alternatively if dr,dt is negative then $drdt+dtdr=0$ is maximum instead for dr-dt solutions. In fact all dr,dt sign cases imply a single invariant extremum: $drdt+dtdr=0$ (our 1st invariant) (1.9)

Since we have two *independent* variables r,t in $\text{rel}\delta(\delta z\delta z)=\delta(dr^2-dt^2)=\delta dr^2-\delta dt^2+\delta k^2\equiv \delta(dr^2-dt^2+k^2)\equiv\delta(dy^2+dz^2)\equiv-\text{Real}\delta(\delta z)$ still with two independent variables y,z because we can choose k^2 randomly. Thus real eq.1.6 $Real(\delta(\delta z\delta z)+\delta\delta z)=0$ becomes $\delta(dx^2+dy^2+dz^2-dt^2)=0$ with 1.9 still holding (since $\delta(idt)=0$). So we have $2\oplus 2=$**4 dimensions** and $dr^2\equiv dx^2+dy^2+dz^2$. Note in general dr,dt are any two of these 4 independent variables implying eq.1.9 defines a Clifford algebra(A3). Next **factor** the real part of eq.1.7 to get (our 4D universal 2nd invariant $ds^2=dr^2-dt^2$)

$\delta(dr^2-dt^2)=\delta[(dr+dt)(dr-dt)]=\delta(ds^2)=[[\delta(dr+dt)](dr-dt))]+[(dr+dt)[\delta(dr-dt)]]=0$ (1.10)

Solve eq. 1.10 and get ($\rightarrow\pm$e) $dr+dt=\sqrt{2}ds$, $dr-dt=\sqrt{2}ds$, (1.11)

($\rightarrow$light cone *ν*) $dr+dt=\sqrt{2}ds$, $dr=-dt$, (1.12)

" " $dr-dt=\sqrt{2}ds$, $dr=dt$, (1.13)

($\rightarrow$vacuum) $dr=dt$, $dr=-dt$)

Equation 1.10 gives Special Relativity $ds^2=dr^2-(1)^2dt^2$ (note natural unit *constant* 1^2 ($\equiv c^2$) in front of the dt^2) and eq.1.9 gives the Clifford algebra. A third ds invariant in eq.1.14 in the section 1.1 changes these operators into derivatives thereby making these **Dirac equations.** So 1.11-1.13 are (**neutrino *ν*** &stable **electron** e) leptons. All the rest are composites of e,*ν*. So just postulate 1

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