MAGNETIC MODE HARTREE POTENTIAL AND TOROIDAL MODES OF PROTON AND ELECTRON

**More for physicists/ magnetic toroidal** return to previous

*Introduction*

Lamb shift self conjugation to the generalized proton with the electron in any atom consisting of Z protons is the base for coherent magnetic formation in the dark matter medium. It can be shown that the lamb shift gap of 5.060157 10-7 m (5.1 10-7) and gap energy of 5.87 10-6 eV are constants of the dark matter medium.

To accommodate the posed hypothesis return to the fundamental quantum constants. The quantum magnetic flux ϕ = h/2e is used to explain superconductivity such as pairing electrons and the Hall effect in electric current conductivity. It seems possible to support the hypothesis. This was shown with the following classic calculation for the magnetic field within the Hydrogen atom and the Lamb shift interaction by the dark matter medium. Solar calculations/ 21cm

The quantum relation for hydrogen Hartree potential and Bohr’s radius are generalized for any atom.

Quantum flux ϕ = h /2e = 2.06798 10-15 Weber

Hartree potential W = e2 /(4π εo ao) = 4.35975 10-18 joule

Bohr radius ao = (h /α)(1 /2π me c) = 5.29 177 10-11 m

Flux ϕ H S(cross section) = ϕ /μo = 1.6455 10-9 (amp m)

Flux energy with Hartree potential and Lamb wave length:

(1.6455 10-9 /√π)2 x 5.05843 10-7 = 4.35975 10-25 (Tesla2 m)

Hartree corrected for μo neglecting the 4π. Dev: 5.060157 /5.05843 = 1.000341

These relations are used in the following to prove this statement.

Derivation of dark matter range from Lamb to 21 cm:

ao /λe =137.036/2π = 21.81 (close) λe = 2.4263 10-12 m

ϕ = h/2e = 2.06798 10-15 Wb Torus Volume:

2π2 λe (λe /21.81)2 = 5.9273 10-37 m3 B π (λe /21.81)2 = h B = 1.7042 10-8 T

We = Vtor B2/μo = 1.3700 10-46 joule

Lamb scaling:

B = 1.7042 10-8 T ϕ =1.7042 10-8 x λ = 2.0679 10-15

(not 2nd power in λ because the flux requires a cross section) making λ = 1.2134 10-7 m

Ratio to Lamb of 5.1 10-7 m: 4.203 / 4 = 1.050774 (1.050818)

Factor 4 due to ½c exchange with 144 /137.036 = 1.050818

Bohr’s magneton μb = e h /(4π me) = 9.279 10-24 J/sec (x λe /c) QM relation into energy

In energy WB = 7.5045 10-44 J

Ratio to torus energy WB /Wtor = 7.5045 10-44 /1.370 10-46 = 547.774

Deviation 547.774 /21.812 = 1.15157 (1.154700)

Resonance 21 cm line Capacity and self induction L of the electron (repeated again)

Static energy Wst = e2 /(2εo re) re = λe /137.036 C = 1/(2εo re) = 3.194 1024 Farad

Induction L = μo λe3 /137.0362 = 9.558 10-46 Henry

LC = 3.053 10-21 (1 /√LC) = 1.810 1010 ω = 2π f = (1 /√LC) f = 2.881 109 Hz

λ = c /2.881 109 = 0.1041 m Factor 2 due to ½ c condition

Bohr’s magnetic filament or flux tube

Hartree potential W = e2 /(4π εo ao) = 4.35975 10-18 joule **E-mode**

Bohr radius ao = (h /α)(1 /2π me c) = 5.292 10-11 m

Defined as Bohr’s flux tube or filament: Solar calculations/ 21cm

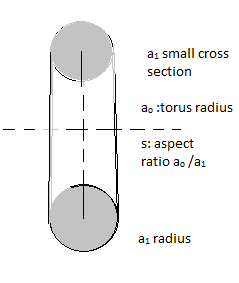
CH = B2 λ = (1.645 10-9 /√π)2 x 5.1 10-7 = 4.36 10-25 (T2 m) **M-mode**

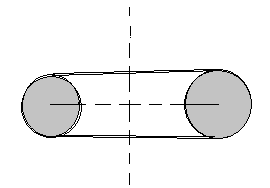
ϕ/μo= 1.645 10-9 = H 2πλ (current state) ring current

Torus Volume: 2π2 λe (λe /21.81)2 = 5.92723 10-37 m3

B π (λe /21.81)2 = h B = 1.7042 10-8 T We = Vtor B2/μo = 1.3700 10-46 joule

Electron loops 16 times through torus inner hole then stretching into a line of λe  with conjugated charge induction to either end. Top to top configuration of cubic pyramids for conjugated induction.





Electric charge E mode and magnetic toroidal M mode, electron.

In general between radius of a and torus radius of R:

1st option: Current filament H = I /2πR with B = μo H

Toroidal magnetic energy W1 = 2π2 B2 a2 R

Equality between axial magnetic B and filament at radius R

B = μo I /2πR Elimination of B W1 = ½ μo I2 (a2/R)

2nd option: H = I /2πa equality and elimination W2 = ½ μo I2 R

Electro static energy W1 = e2 /(2εo R2) and W2 = e2 /(2εo a2)

Either option results in e2 c2 = Io2 = If2 a2 R c2 = 1 /(εo μo) Io2 /If2 = a3 s

The wave length of charge exchange , either a or R is equal to the torus parameters of ao and s and it is at 90o to toroidal magnetic state.

For the electron with fine structure constant of 1/137.036 :

a3 = 137.036/2π = 21.81 and s = 2π2 /137.036 Then Io2 /If2 = π (see below)

minimum: Io2 /If2 = 4 due to ½ c but also 144/137.036 is an option in other situations.

Hartree potential W = e2 /(4π εo ao) = 4.35975 10-18 joule toroidal induction

Bohr radius ao = (h /α)(1 /2π me c) = 5.292 10-11 m ϕ/μo = 1.6455 10-9 (amp m)

CH = B2 λ = (1.645 10-9 /√π)2 x 5.1 10-7 = 4.36 10-25 (tesla2 m)

B2 = 9.2838 10-10 T Bo π(λe /21.81)2 = h Bo = 1.704 10-8 T

Flux conservation: B2 ao2 = Bo a12 2.600 10-30 = 1.704 10-8 a12 with a1 = 1.235 10-11 m

Aspect ratio s = ao/a1 = 4.285 close to 4/3π = 4.189

Torus volume without 2π2 : Hartree: a12ao = a13 4.285 = 8.07 10-33

Electron: (λe /21.81)3 21.81 = 3.00 10-38 s = 21.81

Electron energy: Wtor = 1.3700 10-46 J

Hartree torus energy 2π2 a13 4.285 B12 /μo = 19.739 x 8.07 10-33 x 6.85 10-13 = 1.092 10-43 J

Majorano effect electron or self conjugation of electron

CH = B2 λ λ(Lamb) = 5.1 10-7 m

The difference between toroidal self conjugation, transforms to CH and relaxates to origin again.  
Without toroidal conjugation then only solenoid self conjugation, which is stand alone resulting in no relaxation option. Therefore magnetic flux conservation is necessary linking the M-mode to mediating mass of the dark matter medium.

Electron inversion scaling 4/3π = 4.189 2π2 = 19.73920

1st scaling √137.036 = 11.70623 (/4.189) = 2.79452

137.036 /2π2 = 6.94234(/4.189) = (1.65727)2 = 2.746560

2.74656 x 4.189 = 11.50534 132.3728 137.036 /132.3728 = 1.035227

Check

2nd scaling 2π2: (4.71215)1/3 = 1.67651 x 4.189 = 7.022904

19.73920 /4.189 = 4.712150 19.73920 x 7.022904 = 138.6265

138.6265 /137.036 = (1.01160)3 = 1.035223

The importance of the π as parameter in toroidal flux conservation demonstrated.

Mediating mass toroidal scaling valid for generalized H atom. So any Z charged atom.

  CH = 4.35975 10-25 /7.325 = 5.92 10-26 (T2 m)

With Lamb 5.1 10-7 m then B1 = 3.430 10-10 T

B1 a12 = 9.284 10-10 (B2)x (5.292 10-11)2 (ao) = 2.60 10-30 (T2 m)

a1 = 8.71 10-11 m s = a1/ao = 1.646 = 7.3251/4 B1 /Bo = 2.655

W(Bohr): 1.092 10-43 J W(torus) = 2π2 1.646 a13 B12 /μo = 2.0102 10-42 Joule ratio:1.84 > Bohr

Toroidal induction proton. Make supposition proton belongs to the contracted space of μo = 1

λp = λe /1728 = 2.42631 10-12 /1728 = 1.404114 10-15 m

Bohr magneton (λp /c): W = 2.226 10-50 J

Toroidal volume: B12 2π2 λp3 = B12 x 5.463 10-44 = 2.226 10-50 J

Reciprocal of μo B2 = μo B12 = μo x 4.077 10-7 μo = 1.25664 10-6

Then B = 7.155 10-7 T

B π a12 = h then 7.155 10-7 π a12 = 6.627 10-34 a1 = 1.7170 10-14 m

Again toroidal volume (7.155 10-7)2 /μo x 2 π2 s (1.717 10-14)3 =2.226 10-50 J

Then aspect s: s = 5.4686 10-4 m Reciprocal of s = 1.8286 103

Giving 1.8286 103 x 1.717 10-14 = 3.140 10-11

Bohr’s radius 5.292 /3.140 (10-11) = 1.68535 /√(2√2) = 1.0021

Conjugated magnetic induction to Ce = B2 λ as for Hartree

Ce = (1.704 10-8)2 x 2.4263 10-12 = 7.045 10-28 (T2 m)

Then equality to electron λ = λe Ce = (7.155 10-7)2 x λ λ = 1.376 10-15 m

ratio to λe : 1763.1 And λp as initial condition 1763.1 /1728 = 1.020320

Equilateral pyramid node of height divided by four gives 1.020620.

Hyper fine toroidal induction for proton electron state: anomalous magnetic moment: 2.973

Energy: W(proton) = 2π2 a3 B2 /μo = 2.226 10-50 Joule

Flux conservation: B πa2 = h 2.226 10-50 a = 2 h2 /μo a = 3.140 10-11 m

Then B = 2.14 10-13 T

Ratio to ao = 5.292 10-11 m is: 1.685 < ao while s(med) = 1.646 < ao (s:aspect ratio)

Take 2π2 a3 B2/μo = 2.226 10-50 J

New equilibrium 2π2 ao3 B2 /(1.6852 μo) = 2.226 10-50 /1.6852

s = 2.973 /1.6852 = 1.047 calculate C hyper state:

C(hyp) = (2.14 10-13)2 x 5.1 10-7 = 2.335 10-32 (T2 m)

Although considering the marginality to the aspect ratio, nearly closed inner radius, is shown how intricate the hyper state is with respect the fast dark medium. No other magnitude in anomalous magnetic moment can give the proton condition, therefore an unique state.

*End conclusion:*

First gravity fast state or time forward state:

Toroidal state of electrons in conjugated E –mode converts into toroidal M-mode of Bohr’s dimensions then squeezing or separation of the pseudo e-neutrinos into two opposing states

giving the Lamb state.

Bohr’s filament or magnetic flux tube Lamb state defined as Bohr’s flux tube:

CZN = BZN2 λlamb Hartree(ZN)

The first fast state via mediating mass of any atom Z-charge to N neutrons.

Then in second state relaxation into inertia state of electric charge.

The 1st state collective coherence works only in gravity (acceleration)

return to previous

For scaling calculations of Bohr’s magneton of electron and proton and vacuum permeability μo  =1 see chap 2, par 4 to par 10:

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