ARTICLE 24 QUÍMICOFÍSICA SILVESTRE VALOR Electron Probabílíty: 1s orígín electron bírth The last dílígence to Potí Rock – Snow Híll Víctoría Javier Silvestre www.eeatom.blogspot.com

ABSTRACT

This is last article of 24 dedicated to atomic model based on Victoria equation (Articles index is at end). C_{POTI-AL-d→∞} evolution with Z is carried out in this article where C_{POTI-AL-d→∞} is C_{POTI} angular limit when d→∞ and Z is atomic number. Main axis is C_{POTI-AL-d→∞} for 1s electron and relativistic relation existence that can justify its behaviour.

Two final acts present so-called matter surprise and relation of remaining OES with initial OES for all: 1s OES. OES (origin electronic system) are all ns electrons and origin of all is 1s [1,12]

KEYWORDS

Poti Rock, 1
s Victoria Hill, Poti Circle, Feliz Sunflowers Corral, C
POTI-AL-d $\rightarrow\infty$ CPOTI-R CPOTI-XY

INTRODUCTION

After explaining C_{PEP} within necessary NIN relations [9,12], this article is dedicated to serving as introduction to the C_{POTI} -NIN connection. Final article of first three parts is written in acts:

Act 1: The last diligence to Poti Rock – Snow Hill Victoria

Act 2: The relativistic blade runner of Victoria Hill

Act 3: Western Rodeo in Poti Rock

Act 4: Feliz Sunflowers Corral (Poti Rock concentric snow wells)

Act 1: The last diligence to Poti Rock – Snow Hill Victoria

P83 1s $C_{POTI-AL-d \rightarrow \infty}$ Hill caused by relativity

 $C_{POTI-AL-d\to\infty}$ value in Z function for 1s electron, which is flat as plain in relativity absence, is transformed into hill with drop slope that increases with Z and that implies greater variation between theoretical 1s ionization energy (E_{oT}) and experimental 1s ionization energy (E_o):

 $\uparrow Z \rightarrow \uparrow E_{oT} \rightarrow \uparrow v \rightarrow \uparrow relativistic effects$ (Abbreviations Table is at end article).

 $C_{POTI-AL-d\to\infty}$ is C_{POTI} angular limit when $d\to\infty$ [5] and Z is atomic number. Theoretical 1s ionization energy (E_{oT}) is given by (1):

(1) $E_{oT} = E_{oT(Z=1)}Z^2$ with $E_{oT(Z=1)} = -13,6056899 \text{ eV} = -2,17987161E-18 \text{ J}$

General formula for $C_{POTI-GAL-d\to\infty}$ is provided by (2) [5] where f (3) is constant in Victoria Equation development [1].

(2)
$$C_{POTI-GAL-d} \rightarrow \infty \left(\frac{\alpha_{NOA}}{2}\right) = \frac{1}{F_c} \frac{2^{3/2} \text{ fzm e}^{1/2}}{(-E_o)^{1/2} \hbar} = \frac{2^{3/2} \text{ fzm e}^{1/2}}{(-E_o)^{1/2} \hbar} \left(\frac{\text{tg}^2\left(\frac{\alpha_{NOA}}{2}\right)}{1 + \text{tg}^2\left(\frac{\alpha_{NOA}}{2}\right)}\right)^{1/2}$$

(3) $F = \frac{\text{Kq}^2}{2} z = \text{fz} = 1,153538564 \bullet 10^{-28} z$

1s has electronic extremes with $\alpha_{NOA}=180$ and, consequently, $F_c=1$ [5]. Demonstration of $C_{POTI-AL-d\to\infty}$ value in Z function for 1s electron is flat as plain in relativity absence is in (4). Experimental energy (E₀) present in (2) is replaced by theoretical value in (4). Final result is constant value equal to 2 regardless of whether 1s is from on atom or another: $C_{POTI-AL-d\to\infty}$ (1s with E_{0T}) vs Z is flat plain.

(4)
$$C_{\text{POTI-AL-d} \rightarrow \infty} (1 \text{ s } E_{\text{oT}}) = \frac{1}{1} \frac{2^{3/2} \text{ fzm }_{e}^{1/2}}{(-E_{\text{oT}(z=1)} z^{2})^{1/2} \hbar} = \frac{2^{3/2} \text{ fm }_{e}^{1/2}}{(-E_{\text{oT}(z=1)})^{1/2} \hbar} = 2$$

 $C_{POTI-AL-d\to\infty}$ (1s) vs. Z is $C_{POTI-AL-d\to\infty}$ (1s with E_o) vs. Z and E_o experimental use effect is clear in **Figure 1**. " C_{POTI} H \rightarrow 0" or "Cpoti H \rightarrow 0" are referred to method by which $C_{POTI-AL-d\to\infty}$ has been calculated. Only methods performed by H_i removal have been shown for any division and for $d\to\infty$ [5], but soon method based on relativistic excess is incorporated as C_{POTI-R} or Cpoti-r or Cpoti-relativistic. Effect is slight at first, but later negative slope is accelerated with Z and all this with discontinuities absence.



This discontinuities absence is accompanied by remarkable sensitivity to energetic variations. However this sensibility is even more appreciable with later representations. Example used is energetic variations in Au 1s ionization energy or $E_0(Au)$. Linear regression coefficient R^2 is close to 1 (0.9999) and regression line is practically superimposed on $C_{POTI-AL-d\to\infty}$ values of Z=[77,81] (**Figure 2**). Trend is not totally linear because negative slope is accelerated with Z (Figure 1), but is good approximation for non-wide Z range.

Energetic variations are $E_o(Au)$ -50 eV (-0,0536%) and $E_o(Au)$ +25 eV (+0,0268%) and changes in $C_{POTI-AL-d\to\infty}$ are seen in **Table 1** or **Figure 3** where energetic modified points are separated from linearity and linear regression coefficient R² goes down in both cases to a 0.9976 and 0.9987 respectively.

Table 1 - C _{POTI-AL-d$\rightarrow\infty$} (1s) for Z=[77,81] and Au with energetic changes.					
Z	77	78	79	80	81
$C_{POTI\text{-}AL\text{-}d \rightarrow \infty}$	1,91364	1,91108	1,90846	1,90579	1,90307
E ₀ (Au)-50 eV			1,90795		
E _o (Au)+25 eV			1,90872		

Energetic modifications (-50 and 25 eV) are not very large compared to E_0 and also with so-called excess relativistic (5):

(5) 1s Excess relativistic = $E_{oT} - E_o = -13,6056899 \text{ eV} * 79^2 + 93254,3 = 8341,19 \text{ eV}$

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Although two conclusions can be listed:

* $C_{POTI-AL-d\to\infty}$ (1s with E_{oT}) vs Z is flat plain that really is turned toward hill of increasing fall with Z.

* $C_{POTI-AL-d\to\infty}(1s)$ vs Z is sensitive to energetic variations and can be used as first approximation to ionization energy value.

Reason that has been wieled as fundamental, relativity, for mutation of plain towards hill is still necessary to relate.

Act 2: The relativistic blade runner of Victoria hill

P84 Blade runner Relativity effect on CPOTI

Infinite division velocity or $(v_i)_{d\to\infty}$ divided by two relativistically affects C_{POTI}

Scheme steps are as follows:

Ionization energy \rightarrow Kinetic energy \rightarrow velocity \rightarrow v/2 \rightarrow Lorentz Factor \rightarrow C_{POTI-R} (1s)

1) Victoria Equation [1] shows relation between ionization energy (in general IE and especially used E_o for 1s ionization energy)

(6)
$$(E_i)_{d\to\infty} = IE/2$$

And as for any division (d) of A and B electronic extremes is fulfilled (where E_k and E_P are kinetic and potential energy respectively):

(7)
$$E_{ki} = - E_{Pi} / 2$$

(8) $E_i = E_{Pi} + E_{ki} = -2E_{ki} + E_{ki} = -E_{ki}$
(9) $E_i = - E_{ki}$

Using (6) and (9) is obtained (10) since (9) is applicable to any division and therefore also to infinite division.

$$10 (Ek_i)_{d \to \infty} = -IE / 2$$

2°) Obtaining Infinite division velocity or $(v_i)_{d \rightarrow \infty}$

 $(v_i)_{d\to\infty}$ (11) is obtained from (10), kinetic energy classic equation and considering that electronic extreme mass is equal to electron mass divided by 2 because s electron has two electronic extremes. $(v_i)_{d\to\infty}$ is equal to electron velocity (v_e) according equation [1].

$$(11)(v_i)_{d \rightarrow \infty} = v_{d \rightarrow \infty} = \left(\frac{2(E_{ki})_{d \rightarrow \infty}}{m_i}\right)^{1/2} = \left(\frac{-IE}{m_i}\right)^{1/2} = \left(\frac{-2IE}{m_e}\right)^{1/2} = v_e$$

3) C_{POTI-R} relativistic equation with Lorentz factor.

 C_{POTI-R} relativistic equation with Lorentz factor is given by (12) and includes factor of 1/2 that must be justified. C_{POTI-I} or initial C_{POTI} has been considered to be value absent of relativity and therefore it seems logical that its value should be equal to 2 as justified in (4).

(12) C_{POTI - R}(1s) = C_{POTI - I}
$$\left(1 - \left(\frac{V_{d \to \infty}}{2c}\right)^2\right)^{1/2}$$

 $C_{POTI-AL-d\to\infty}$ vs. Z curve drawn in Figure 1 is repeated in **Figure 4** together with new curve resulting from relativity equation (12). There is very good overlap between both curves with slight appreciable deviation for high Z. This overlay allows comments:

* C_{POTI-AL} can be explained from relativity

* Good overlap interval occupies all Z data (Till Z=110)

* $E_{\rm o}$ and excess relativistic can be estimated from relativity and also allows lucubration on $E_{\rm o}$ with Z>110



Equality between $C_{POTI-AL-d \to \infty}$ and C_{POTI-R} is not complete

Small deviation observed in Figure 4 is also found when selected Z interval is lower (**Figure 5** with Z=[1,50]). Relative Change (13) is the absolute difference between two methods and where $C_{POTI-AL-d\to\infty}$ or $C_{POTI-AL-H\to0}$ is considered as reference. **Figure 6** represents (13) till Z=110 for 1s.

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Act 3: Western Rodeo in Poti Rock

Small deviations observed in Figure 4 and 5 are treated by z relativistic.

P85 Robbery in Poti Rock Freight Train

Equality between $C_{POTI-AL-d\to\infty}$ and C_{POTI-R} is favoured by how nucleus charge is seen from electron position.

Equality between $C_{POTI-AL-d\to\infty}$ and C_{POTI-R} with z_r as z allowing adjustment between both equations is in (14):

(14) C_{POTI - AL - d}
$$\rightarrow \infty$$
 (1s) = $\frac{2^{3/2} f z_r m_e^{1/2}}{F_c (-E_o)^{1/2} \hbar} = C_{POTI - I} \left(1 - \left(\frac{V_d \rightarrow \infty}{2c} \right)^2 \right)^{1/2} = C_{POTI - R} (1s)$

(15) is (14) considering (11) and $IE=E_0$

(15)
$$C_{POTI - AL - d \rightarrow \infty}(1s) = \frac{2^{3/2} f z_r m_e^{1/2}}{F_c (-E_o)^{1/2} \hbar} = C_{POTI - I} \left(1 + \frac{E_o}{2m_e c^2}\right)^{1/2} = C_{POTI - R}(1s)$$

 z_r can be calculated for any 1s energy (E_o) with (16) which has been obtained from (15). (17) includes that $F_c=1$ for s electrons and $C_{POTI-I}=2$ for 1s electron (4).

$$(16)z_{\rm r} = \frac{F_{\rm c}\hbar C_{\rm POTI - I}}{2^{3/2}\,{\rm fm_e}^{1/2}} \left(-E_{\rm o}\right)^{1/2} \left(1 + \frac{E_{\rm o}}{2m_{\rm e}c^2}\right)^{1/2}$$
$$(17)z_{\rm r}(1s) = \frac{\hbar}{2^{1/2}\,{\rm fm_e}^{1/2}} \left(-E_{\rm o}\right)^{1/2} \left(1 + \frac{E_{\rm o}}{2m_{\rm e}c^2}\right)^{1/2}$$

1s reference ionization energies (E_o) [13] are incorporated in (17) and Z-z_r vs. Z is represented in **Figure 7**. Difference between Atomic number and z_r grows progressively until is ≈ 0.37 when Z=110: loss or robbery of z because is less than Z.

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In the same way, Z- z_r vs. 1s Excess relativistic = E_{oT} - E_o (5) is made in **Figure 8** where trend with more linear character is observed. Both in Figure 7 and 8, sensitivity to E_o alterations is magnified. Same modifications made in Figure 3 are applied in **Figure 9**, Z- z_r vs. 1s Excess relativistic, where increase in sensitivity to said alterations is high. Additionally, an even smaller variation of $0.005\% E_o$ is easily verifiable its effect. Linear regression with R²=0.9999, as in Figure 3, has been calculated with atoms whose Z=[77,81].



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Western Rodeo in Poti Rock: zr vs. /-Eo/

(18) comes from (17) and is previous step to squaring both sides of equation.

$$(18) \frac{2^{1/2} f z_r m_e^{1/2}}{\left(-E_o\right)^{1/2}} = \left(1 + \frac{E_o}{2m_e c^2}\right)^{1/2}$$

(19) is obtained after square elevation, denominators elimination and finally, resulting equation is equalled to zero. Resulting equation provides circumference if difference in axes scale is considered (**Figure 10**)

$$(19)\left(\frac{2fm_{e}c}{\hbar}\right)^{2}z_{r}^{2} + E_{o}^{2} + 2m_{e}c^{2}E_{o} = 0$$

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Reference energies are represented in Figure 10 till Z=110 and from said Z, E_o values are included until reaching maximum E_o or $(E_o)_{MAX}$ (20). Medium E_o or $(E_o)_{MED}$ (21) is obtained as half maximum. Circumference centre is (0, 510998,96 eV). (- E_o) is represented so that value is positive.

$$(20)(E_{\circ})_{MAX} = -2m_{e}c^{2}E_{\circ} = -1,63742 \cdot 10^{-13} \text{ J} = -1021997,92 \text{ eV}$$
$$(21)(E_{\circ})_{MED} = \frac{-2m_{e}c^{2}E_{\circ}}{2} = -8,18711 \cdot 10^{-14} \text{ J} = -510998,96 \text{ eV}$$

 z_r (22) is obtained from (19) and its maximum (z_r)_{MAX} (23) occurs when $E_o = (E_o)_{MED}$. (z_r)_{MAX}=137.036017 and from maximum, z_r decreases fulfilling figure until returning to null z_r . This z_r decrease is produced even when atomic number (Z) increases and causes (- E_o) growth. Lower quadrant of Figure 10 dedicated to negative z_r can be suggested as identical behaviour performed by non-matter.

$$(22)z_{\rm r} = \frac{\hbar}{2{\rm fm}_{\rm e}{\rm c}} \left(-{\rm E}_{\rm o}{}^2 - 2{\rm m}_{\rm e}{\rm c}^2{\rm E}_{\rm o}\right)^{1/2}$$

$$(23)(z_{\rm r})_{\rm MAX} = \frac{\hbar}{2fm_{\rm e}c} \left(-(E_{\rm o})_{\rm MED}^2 - 2m_{\rm e}c^2(E_{\rm o})_{\rm MED}\right)^{1/2} = 137,036017$$

Difference in axes scale (24) is obtained from z_r in circumference equation (19)

$$(24)\frac{2\text{fm}_{\text{e}}\text{c}}{\hbar\text{q}} = 3728,939 \text{ eV/Z} = \frac{510998,96 \text{ eV}}{137,036017}$$

Act 4: Feliz Sunflowers Corral (Poti Rock concentric snow wells)

Feliz sunflowers Corral is $C_{POTI-d\to\infty}$ concentric wells succession that are located in more interior positions as n principal quantum number grows:

* Wells are ns origin electron system (OES)

* OES situated from most external to most internal are: 1s 2s 3s 4s 5s...

* Sunflowers are because C_{POTI} movement between two consecutive atoms is based on golden angle ($\approx 137.508^{\circ}$): golden number appears in sunflower florets formation.

Steps followed:

1) 1s ionization energy (E_o) is calculated with (25) which is second degree equation resolution. Positive sign preceding square root is changed by negative when: $-E_o > (-E_o)_{MED} = 510998,96 \text{ eV}$. In any case, study is centred on reference data for rest of OES and, in special 1s OES case, is calculated with (25) up Z=137 and $-E_o < 510998,96$

(25)
$$E_o = \frac{-2m_ec^2 \pm \sqrt{(2m_ec^2)^2 - 4\left(\frac{2fm_ec}{\hbar}\right)^2}}{2}$$

2) $(v_i)_{d\to\infty}$ is obtained with (11) and C_{POTI-R} till $z_R=137$ with (12).

3) Z must be greater than golden angle number (\approx 137.508) if is considered that:

- * (z_r)_{MAX}=137.036017
- * Z>z_R+0.35 when Z=110 (Figure 7)
- * Remarkable expected growth of difference between Z and z_r when Z>110
- * Possible extrapolation is 1.5 for $z_r=137$, that is, Z \approx 138.5 \approx 1+golden angle
- * Z=atoms with 1s OES

4) C_{POTI-R} is subdivided into two coordinates based on rotation angle that, in special 1s OES case is golden angle because Z=atoms with 1s OES > golden angle. Two coordinates are $C_{POTI-R-X}$ (26) and $C_{POTI-R-Y}$ (27). General equations are (28) and (29) where:

* A is atom number with ns. For example, carbon is fourth atom with 2s electron after Li, Be and B.

* ϕ must ensure that total atoms with ns considered (maximum A or A_{MAX}) is greater than rotation angle (30)

 $(26)C_{\text{Poti-R-X}}(1s) = C_{\text{Poti-R}}(1s) \cdot \cos((90 - 137, 507764 * (Z - 1)))$

$$(27)C_{\text{POTI-R-Y}}(1s) = C_{\text{POTI-R}}(1s) \cdot \sin((90 - 137,507764 * (Z - 1)))$$



$$(28)C_{POTI - R - X}(ns) = C_{POTI - R}(ns) \cdot \cos((90 - \frac{360}{1 + \varphi^{1/2}} * (A - 1)))$$
$$(29)C_{POTI - R - Y}(ns) = C_{POTI - R}(ns) \cdot \sin((90 - \frac{360}{1 + \varphi^{1/2}} * (A - 1)))$$

$$(30)A_{\rm MAX} > \frac{360}{1+\varphi^{1/2}}$$

 φ must be whole number and give angle of golden angle connotations. For example $\varphi=6$ does not provide angle similar to effect obtained with golden angle ($\varphi=5$)

5) C_{POTI} for rest of ns (with n>1) is calculated with NIN coupling [6,9] (31) where IE and E_0 are ionization energy of ns and 1s respectively.

$$(31)C_{\text{POTI}}(ns) = C_{\text{POTI}}(1s) \left(\frac{\text{IE}}{\text{E}_{o}}\right)^{1/2}$$

 A_{MAX} , ϕ and rotation angle are in **Table 2** if Z \approx 138.5 as estimated in point 3) and (30) is fulfilled. A_{MAX} is calculated with consecutive order or full shell filling. For example A_{MAX} for 5s is given by (32). Full shell filling is filling observed when Z is high [13].

Table 2 - A_{MAX} , ϕ and rotation angle with Z \approx 138.5 and compliance with (30)						
OES	$\approx A_{MAX}$	φ	rotation angle			
1s	138.5	5	137,507764			
2s	136.5	7	127,529528			
3s	128.5	7	127,529528			
4s	110.5	13	108,99923			
5s	78.5	39	77,879952			

 $(32) \ A_{MAX} \ (5s) = 138.5 - 1s^2 - 2s^2 - 2p^6 - 3s^2 - 3p^6 - 3d^{10} - 4s^2 - 4p^6 - 4d^{10} - 4f^{14} = 78.5$

 $C_{POTI-XY}(1s)$ is in Figure 11 and rest of ns must remain inside. 1s and 2s are represented in **Figure 12** and is corroborated as $C_{POTI-XY}(2s)$ does not penetrate since its $C_{POTI}(2s)$ maximum ≈ 0.955 (Z=52 Te) calculated with (31) is less than 1 that is limit zone marked with 1s internal circle. 2s rotation angle (Table 2) affects internal zone, but not external one and therefore $C_{POTI-XY}(2s)$ does not penetrate into $C_{POTI-XY}(1s)$ with its rotation angle=127,529528 and neither if 2s rotation angle were 137,507764. $C_{POTI-XY}(1s)$ till Z=137 is included in Figure 12.

 $C_{POTI}(3s)$ maximum ≈ 0.571 calculated with (31) corresponds to Z=79 (Au) and, as in previous case with $C_{POTI-XY}(1s)$ barrier, $C_{POTI-XY}(3s)$ does not break internal $C_{POTI-XY}(2s)$ barrier (**Figure 13**).

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4s and 5s are added to 1s, 2s and 3s seen in Figures 11, 12 and 13 for joint representation of **Figure 14** and its extension for interval [-0.8, 0.8] (**Figure 15**). C_{POTI}(4s) maximum \approx 0.350 calculated with (31) corresponds to Z=102 (No) and, as in previous cases, C_{POTI-XY}(4s) does not break internal C_{POTI-XY}(3s) barrier (Figure 14 and 15). On the other hand, C_{POTI}(5s) maximum is not achieved with reference data [13]. C_{POTI}(5s) for Z>103 is calculated with second-degree polynomial regression obtained in C_{POTI}(5s) vs. Z curve with Z=[79,103] (33). C_{POTI}(5s) maximum according to estimate (33) is \approx 0.187 and Z=109 and is not far from last data provided by [13] (C_{POTI}(5s with

Z=103) \approx 0.176. C_{POTI-XY}(5s) until Z=137 is represented in **Figure 16** that, considering previous comment, is very similar to Figure 15.

(33)
$$C_{POTI}(5s) = -5,333 \cdot 10^{-5}Z^2 + 0.01167Z - 0.451 R^2 = 0.9992 Z = [79,103]$$



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Epilogue not finished

 C_{POTI-R} relativistic equation with Lorentz factor is given by (12) and includes factor of 1/2 may be related with two alternating equilibriums introduced in [2] with two electronic extremes (EE_A and EE_B) and two movements (OAM or orbital angular movement and SAM or orbital angular momentum):

Time 1: EE_A with OAM and SAM and EE_B only with OAM Time 2: EE_B with OAM and SAM and EE_A only with OAM

 EE_i must supply kinetic energy for one and two movements with same kinetic energy from Victoria equation. Kinetic energy from Victoria equation gives velocity in time 1 for EE_A that is divided into 2 velocities that initially have same sense and direction although later, in time 2, is modified because belong to two different movements: OAM and SAM.

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Abbreviations Table

Following Table indicates abbreviations used in this theory and its use in article in question is marked with X. 21, 22 and 23 are [10] [11] and [12] respectively. 24 is present article.

Abbreviation	[9]	21	22	23	24	Meaning
$\alpha_{\rm NOA}$					Х	Nucleus-Orbit-Angle
3-PA(x,y)		Χ				3-point alignment(n,Group)
А		Χ	Χ	Х		Advance (A or C _{PEP} A). Related with x and S.
A _{ii}				Х		Internal Global Advances
Ai			Χ	Х		Individual Advance
A _{i,a}				Х		Individual Advance Adapted to regression curve
A _E		Х				Estimated Advance (A)
BES	Х	Х	Χ	Х	Х	Born Electronic System
Ci	Х	Х		Х		EE Orbital circumference
C _F	Х					Wavelength compaction factor
C _{PEP}	Х	Х	Х	Х	Х	Probability electrons pair coefficient
CPEP-G		Χ	Χ	Х		Global CPEP and usually written simple as CPEP
C _{PEP-i}		X	X	X		Individual C _{PEP} (BES is referred to the next energetic BES)
C _{PEP-i,a}				Х		C _{PEP-i} with Individual Advance Adapted (A _{i,a}).
Сроті	Χ					Probabilistic Orbital Tide in Third Feliz Solution
C _{PEP} number		Χ	X			C _{PEP} number following Z growth
Cpoti-al	Χ	Χ	X			C _{POTI} Angular Limit
C _{POTI-AL-d→∞}					Х	
Cpoti-r					Х	C _{POTI} considering relativistic excess
CPOTI-XY					X	CPOTI divided into its X and Y coordinates
d	Χ				Х	Birth wavelength division or simply, division

EE	Х	Х			Χ	Electronic extreme
Eki					Χ	EE kinetic energy
$(Ek_i)_{d \to \infty}$					Χ	Ek_i when $d \rightarrow \infty$
Eo	Х				Χ	Initial, birth or output energy
E _{oT}					Χ	1s theoretical ionization energy
((Eo) _B) _E		Х				Estimated born E _o
EPi					Χ	EE potential energy
E.S.		Х				Electronic System (Lobe)
$(E_i)_{d \to \infty}$					Χ	EE energy when $d \rightarrow \infty$
f					Χ	Constant in Victoria Equation
Flui BAR			Χ	Χ		Flui BES A (Global Advance) Region
GNC	Χ					Geometric NIN Coupling
ħ					Χ	Reduced Planck's constant
H _i	Χ	Х		Χ		EE Circular orbit height
IE	Χ	Х	Χ		Χ	Ionization Energy
IEa				Χ		Ionization energy adapted
me					Χ	Electron mass
mi					Χ	EE masss
$\lambda_{Birth} \lambda$					Х	Birth wavelength
NIN	Х	Χ	Χ	Χ	Х	Negative in Negative (Electron in electron concept)
OES	Х	Χ	Χ	Χ	Х	Origin Electronic System
Pi	Х					EE Probability
PN				Х		Points of nativity
PNC	Χ					Probabilistic NIN Coupling
PUB CPEP		Х	Χ	Χ		Probability Union Between CPEP
r _i	Χ	Х		Χ		Distance between nucleus and EE
S		Х	Χ			Start Point meets: S=x
X		Х				x equals to $2/(C_{PEP}-1)$
Vi					Χ	EE velocity
$(v_i)_{d \to \infty}$					Χ	Infinite division velocity
Z	Χ				Χ	Effective nuclear charge
Z		Χ	Χ		X	Atomic number
Zo		Х				Zo is matched with Start Atomic Number (S)
$Z_{A \rightarrow 0}$ (ES)			Х	Χ		Z extrapolated with $A \rightarrow 0$ and (Electronic System)

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