ARTICLE 14

Excited Electron: Relation of Silva de Peral and Alameda: LAN interatomicity with energetic relation.

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ABSTRACT

This is 14th article of 24 dedicated to atomic model based on Victoria equation (Articles index is at end). Relation of Silva de Peral y Alameda refers to excited states and provides linearity between specific energy relationship and LAN of Serelles Secondary Line [2,4] that allows creation of said secondary line obtained from Torrebotana Central Line [1]. Relation of Silva de Peral y Alameda differs from previous relations of Riquelme de Gozy and Flui Piep de Garberí. Relation of Silva de Peral y Alameda refers to one single excited state and to all atoms. Following case is treated in introductory way of this Relation: jump from $1s^2$ to 1sns (isoelectronics with He).

KEYWORDS

Tete-Vic equation. Torrebotana Central Line, Serelles Secondary Line, LAN plain, Relation of Silva de Peral y Alameda, Silpovgar Theory.

INTRODUCTION

Relation of Riquelme de Gozy provides linearity between LAN and E_{dR} where E_{dR} is obtained from E_k [5]. E_{dR} is reference destiny energy and E_k is jump energy with reference data. Relation of Riquelme de Gozy is for one single atom and jump made from same initial state to defined excited state where only n is varied [2,3]. Abbreviations Table is at end article.

Relation of Flui Piep de Garberí [4] is linearity in LAN^{-1} vs. z_s (or with Z) where z_s is z_s Start charge according to P46 [1] and Z is atomic Number. Three relations along their abbreviations are following:

* Relation of Riquelme de Gozy (RG)
* Relation of Flui Piep de Garberí (FPG)
* Relation of Silva de Peral y Alameda (SPA)

Characteristics of two relations including LAN already seen together, i.e. RG and FPG, and SPA advance are summarized in **Table 1**:

Table 1 - LAN relations Characteristics

Relation	Atomicity	Excited State	X-axi	Y-axis
RG	Atom	Yes: varying n	$/Ed_R/$ or Ek	LAN
FPG	Interatomic	No	z_s	LAN^{-1}
SPA	Interatomic	Yes: one specific	Energy relation	LAN mainly

a) Atomicity indicates whether linearity relation includes one o more atoms. RG is valid for one atom, whereas FPG and SPA imply all atoms.

b) Excited state inclusion is expressed in Excited State column. FPG does not include excited state since is focused on ionization energy (IE) and therefore in non-excited state. RG and SPA considerer excited state, but with a clear differentiation nuance:

> * RG is based on, given one single atom, bringing together in linearity all excited states (and non-excited state in ns→ns jump) created when only n is varied.
> * SPA studies one single excited state for all atoms. Basically is inverse situation to commented for RG.

c) X-axis differs in all three relations and is table column dedicated to X-axis of representation where linearity is obtained:

> * RG: X-axis is absolute value of E_{dR} (reference destiny energy) or E_k (jump energy with reference data) can also be utilized.
> * FPG: z_s (start charge) occupies mainly X-axis although also can be used Z (atomic number) because representation can be performed in any unit advancement mode because z_s progresses one by one (P46).
> * SPA: X-axis is energy ratio that is introduced at next point.

d) Y-axis has LAN as absolute centre although in RG is LAN, in FPG is LAN^{-1} and in SPA is mainly LAN, or what is the same, is not LAN in all cases.

P54 Relation of Silva de Peral y Alameda

LAN values of same jump for different atoms are linearly related by energetic correlation (EC). Simple expressions that may contain ionization energy of excited electron (IE), ionization energy of 1s (Eo) or jump energy with reference data (E_k) are examples that have been found as EC.

Relation de Cint de Peral y Alameda for $1s^2$→1sns

Configuration, Term and J of star state (non-excite state) and two destination states (excited states) to be treated are in **Table 2**. "Destiny state 1" maintains opposite spins as start state and is treated later. "Destiny state 1" is considered as "Primitive Jump" or "First Jump" because is the simplest jump of atom with more than one electron. "Destiny state 1" has particular energetic correlation (EC).

Table 2 - Start and destiny states for $1s^2$→1sns

State		Start state		Destiny state 1		Destiny state 2	
Configuration		$1s^2$		1sns		1sns	
Term	J	^1S	0	^1S	0	^3S	1

Study is now continued with the one here called "Destiny state 2" and in which spins are located parallel and their EC meets P55.

P55 Fundamental Relation of Silva de Peral y Alameda

Fundamental Relation of Silva de Peral y Alameda is LAN interatomic linearity for each n destiny as function of FEC (Fundamental Energetic Correlation): quotient between ionization energy of excited electron (IE) in absolute value and jump energy with reference data (E_k) (1). IE is in absolute value for FEC quotient to be positive.

$$(1)\text{FEC} = \frac{/\text{IE}/}{E_k} = \frac{-\text{IE}}{E_k}$$

$/IE/ \geq E_k$ implies that CEF ≥ 1. CEF=1 for the most extreme case which is when $n \rightarrow \infty$ and then $E_k \rightarrow /IE/$. CEF is n function because E_k is n function and each n destiny has its CEF line.

CEF does not provide linearity for all excited jumps according to reference data [5], but for many jumps is applicable and hence is qualified as Fundamental. $1s^2 \rightarrow 1sns$ (Term=^{3}S J=1) is performed to verify P55 effectiveness.

LAN calculation is given by (2) [2,3]:

$$(2)\text{ - LAN} \approx -\text{LAN}_R = \left(\frac{z_s{}^2 E_o}{z_o{}^2 E_{dR}}\right)^{1/2} - n = \left(\frac{z_s{}^2 E_o}{z_o{}^2 (E_K + IE)}\right)^{1/2} - n$$

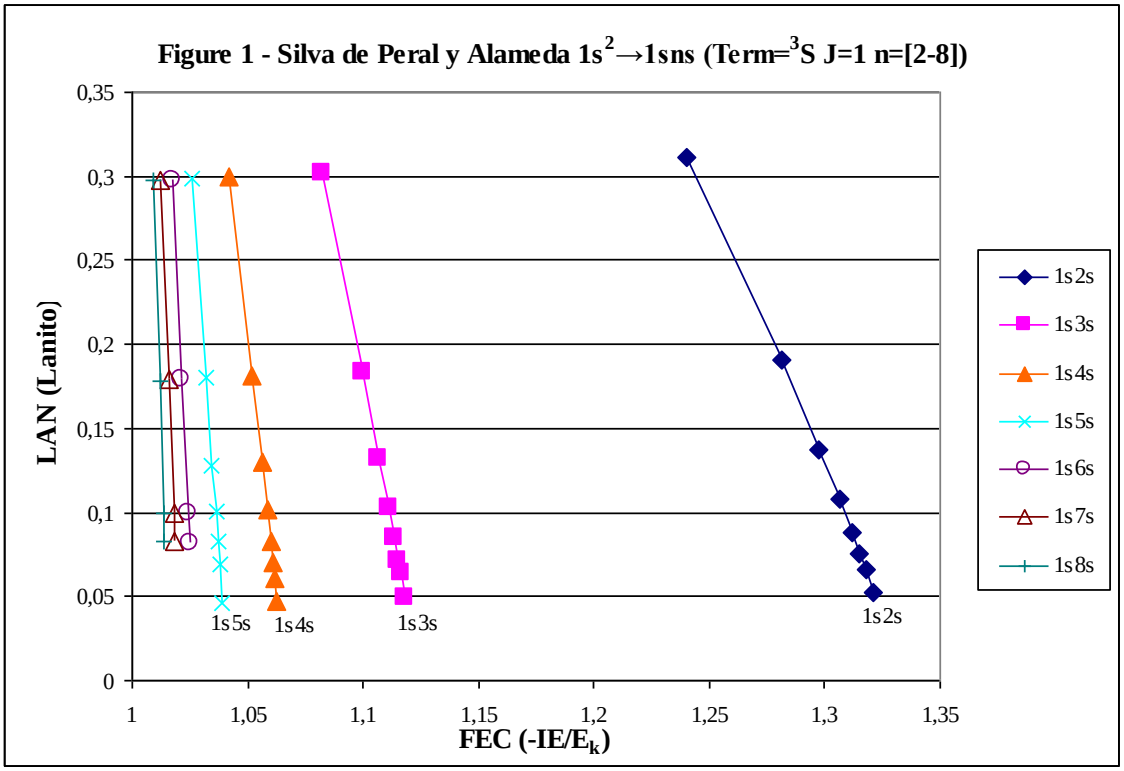
(2) can be simplified in (2.B.):

$$(2.B.)\text{ - LAN} \approx -\text{LAN}_R = \frac{(-E_o)^{1/2} z_s}{(-E_{dR})^{1/2} z_o} - n$$

Ionization energy for 1s (origin electronic system or OES) and Ionization energy for $1s^2$ (born, BES or start electronic system), represented by E_o an IE respectively are taken from [5]. IE, whose IE sign is negative, is added to positive jump energies (E_k) [6] to obtain E_{dR} (reference destiny energy) that is included in (2). z_s and z_o charges follow P46 [1] and n is principal quantum number. Accordingly, LAN_R is calculated as has been checked in [1,4].

In **Table 3** is LAN (2) and P55 Fundamental Relation of Silva de Peral y Alameda (FEC) for $1s^2 \rightarrow 1sns$ (n=[2,3]) with Term=3S and J=1. These two column pairs along with corresponding pairs of jumps up to 1s8s are represented in **Figure 1**. Atoms number with data for Ek in [6] decreases when destiny n increases and only He, Li, B and C have data for 1s6s, 1s7s and 1s8s. 1s2s and 1s3s F have been excluded because are slightly deviated and their values present comments in [6].

Table 3 - FEC and LAN for $1s^2 \rightarrow 1s2s$ and $1s3s$ (Term=^3S and J=1) [He-Ne]				
Symbol	1s2s		1s3s	
	FEC	LAN	FEC	LAN
He	1,240558323	0,31079425	1,082264416	0,30198208
Li	1,281583348	0,19037007	1,099727107	0,18320214
Be	1,297705543	0,13752831	1,107094413	0,13183598
B	1,306231846	0,10766696	1,111131817	0,10281519
C	1,311517068	0,08853363	1,113696449	0,08438231
N	1,315081912	0,07513719	1,115450644	0,07138612
O	1,317910982	0,06584472	1,116927108	0,06400119
F	1,31966618	0,05781284	1,11744449	0,05148032
Ne	1,321221869	0,05187222	1,118501758	0,04887195



Relation of Silva de Peral y Alameda is fulfilled and linear regressions made for jumps of Figure 1 are summarized in **Table 4**. Linear trends increase their destiny n from right to left: ↑n → E_k → ↓FEC (1) until FEC→1 when n tends to infinite; (n→∞) → (E_k→-IE) → (FEC→1). E_k for He and for He and Li have been removed in 1s2s (*) and 1s2s (**) respectively and R^2 improvement has been observed in Table 4. In general terms, linear regressions are excellent with R^2 close to or equal to 1.0000.

Table 4 - Linear equation (LAN=F+Gx) of Silva de Peral y Alameda with LAN vs FEC for $1s^2 \rightarrow 1sns$ (Term=^{3}S and J=1) with n=[2-8] and [He,Ne]			
Excited state	F (lanito)	G (lanito)	R^2
1s2s	4,2886	-3,2026	0,9974
1s3s	7,8268	-6,9518	0,9997
1s4s	12,988	-12,176	0,9999
1s5s	19,535	-18,756	0,9999
1s6s	27,407	-26,649	1,0000
1s7s	36,601	-35,857	0,9998
1s8s	47,145	-46,412	0,9997
1s2s (*)	4,6544	-3,4819	0,9990
1s2s (**)	4,8343	-3,6189	0,9994

SPA relation sensitivity to E_k variations is checked in 1s2s and 1s5s. E_k for $1s^2 \rightarrow 1s2s$ is increases by 1% in Boron and 0,1% in Oxygen. The smallest variation on Oxygen is also easily appreciable in **Figure 2**.

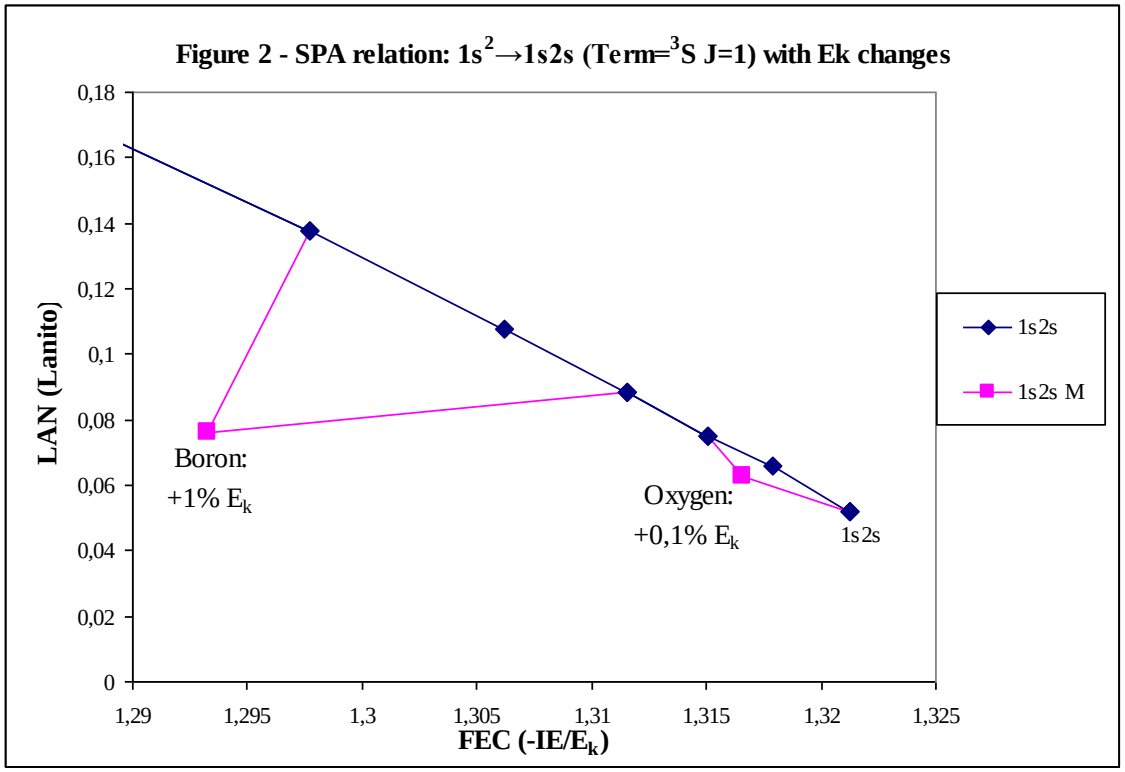
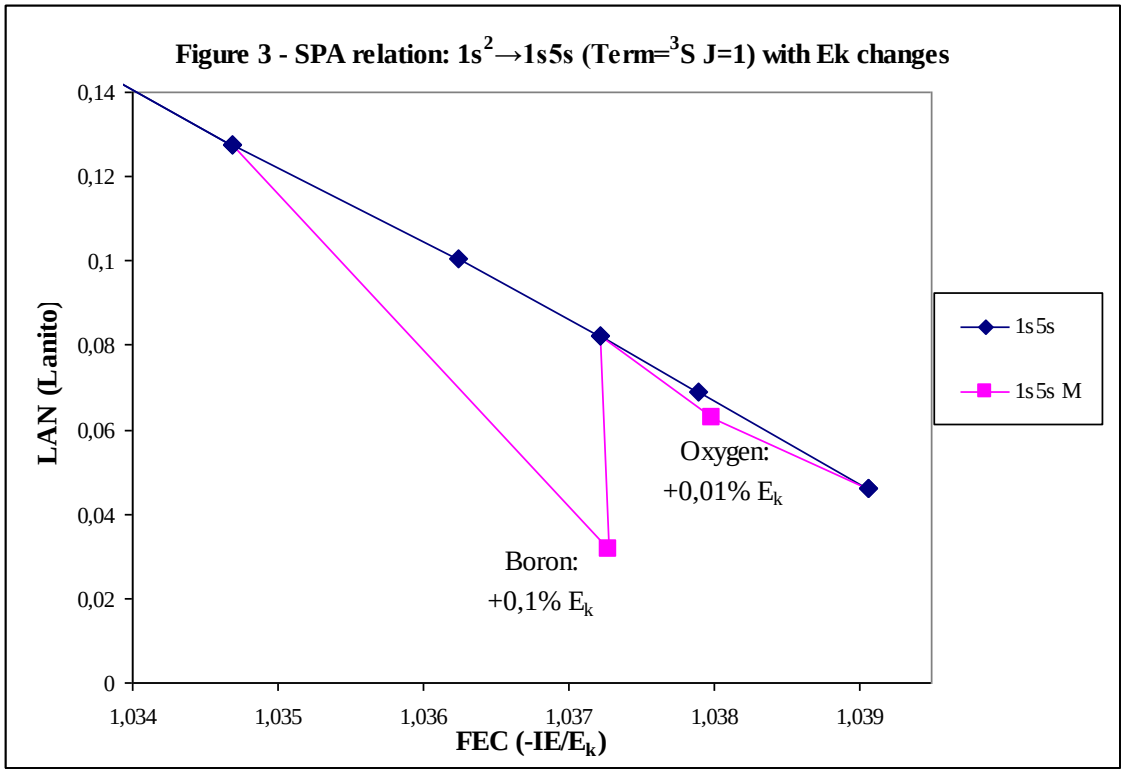


Figure 3 shows same procedure, but with lower E_k increases and performed at higher n: $1s^2 \rightarrow 1s5s$. Now, the largest increase (+0,1% for Boron) is the lowest increase in Figure 2 and both variations performed in Figure 3 are comparable, although are 10 times

inferior, to those realized on same atoms in Figure 2. Summarize reason is that E_k increase causes inverse effect on ($-E_{dR}$) that decreases and, consequently, is more affected by same variation that also is increasingly greater because is performed on E_k. ($-E_{dR}$), and not E_k, is included in LAN_R calculation (2.B.). Variations are as "1s2s M" and "1s 5s M" remarking M=modification.



P56 Silpovgar Theory

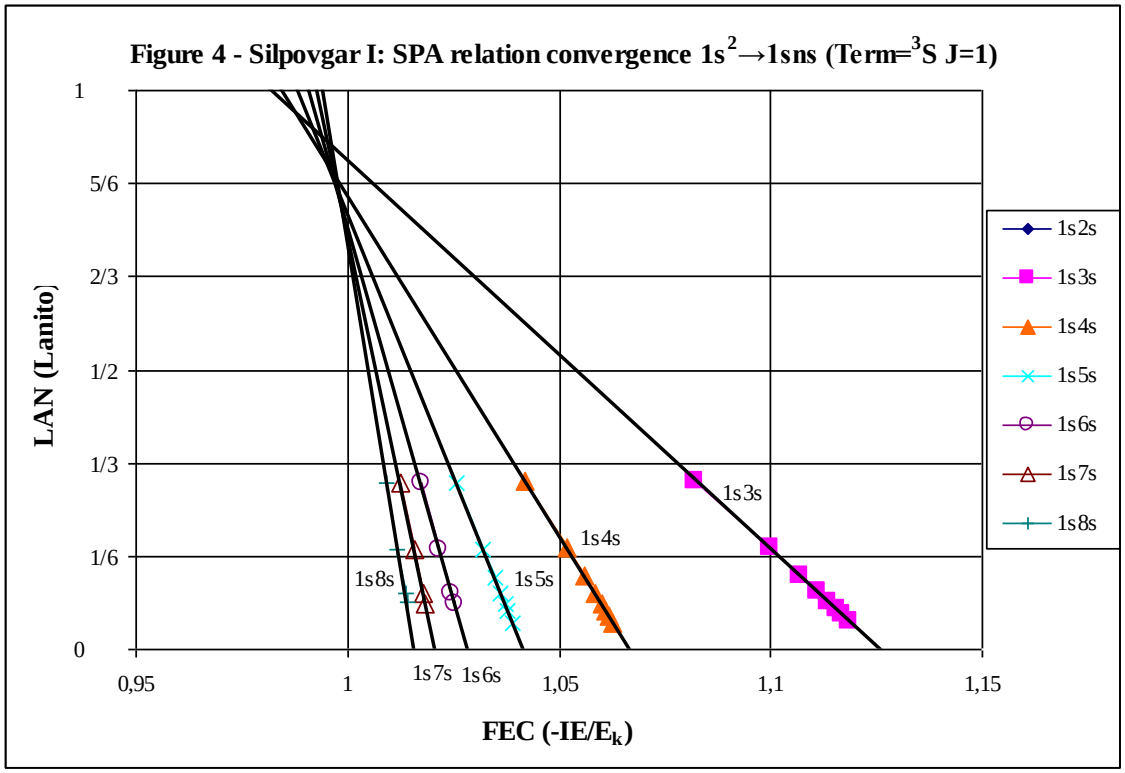
Slope and Y-intercept of Silva de Peral and Alameda (SPA relation) equation for specific electron jump are related to jumping to other destiny n and to slope and Y-intercept of other atoms. Silpovgar is theory that seeks jump globalization from SPA Relation: interatomicity of specific jump.

Silpovgar I: SPA convergence (Indian tents under Silva dominion)

SPA linear regressions for ideal jumps converge in LAN value. Ideal jump simultaneously fulfills Relations of Riquelme de Gozy (RG) and Silva de Peral y Alameda (SPA). Y-intercept convergence is optimized and allows comparisons with SPA relations that have same jump, but different start non-excited n, if at least first jump is discarded and the same are selected (eg 2nd, 3rd and 4th jump). Example of same jump, but different start non-excited n, may be: $1s^22s \rightarrow 1s^2ns$ (Term=^{3}S and J=1) and $1s^22s^22p^63s \rightarrow 1s^22s^22p^6ns$ (Term=^{3}S and J=1). These comparison are made in next article.

SPA linear regressions of Figure 1 are extrapolated to Y-intercept in **Figure 4** to allow illustrating Silpovar I. Linear regressions converge, like wooden poles of indian tent, in

LAN=5/6 for n=[4,8]. 1s8s is last jump in [6]. This convergence point changes if n↑↑ and when (n→∞) → (X→1).



SPA linear regression extrapolation for atoms after Ne

SPA linear regression extrapolation requires equality between LAN (2) and SPA linear equation (3) that considers FEC. Y-intercept (f) and slope (g) are included to be differentiated from a and b of Riquelme de Gozy equation (RG).

$$(3)\text{SPA (with FEC)} = -\text{LAN}_R = f + g\frac{(-IE)}{E_k}$$

LAN uses ($-E_{dR}$) and E_k (3) must be changed to ($-E_{dR}$) through (4) and (5).

$$(4)IE = E_{dR} - E_k$$

$$(5)E_k = E_{dR} - IE$$

Silva de Peral y Alameda relation (SPA) with FEC and ($-E_{dR}$) is given in (6) and equality between LAN (2) and SPA linear equation (6) provides LAN-SPA equality (7):

$$(6)\text{SPA (with FEC)} = f + g\frac{IE}{IE - E_{dR}}$$

$$(7)\text{ - LAN} \approx -\text{LAN}_R = \frac{\left(-E_o\right)^{1/2} z_s}{\left(-E_{dR}\right)^{1/2} z_o} - n = f + g\frac{IE}{IE - E_{dR}}$$

As is done in LAN-RG equality [2], K_{LAN} is employed and (7) becomes (9). K_{LAN} is constant for extrapolation because K_{LAN} and Riquelme de Gozy relation are referred to single atom. Instead, K_{LAN} must consider which atom is calculated because SPA is interatomic relation.

$$(8) K_{LAN} = \frac{(-E_o)^{1/2} z_s}{z_o}$$

$$(9)\frac{K_{LAN}}{\left(-E_{dR}\right)^{1/2}} - n = f + g\frac{IE}{IE - E_{dR}}$$

n is taken to right side of equation and everything is entered into fraction (10):

$$(10)\frac{K_{LAN}}{\left(-E_{dR}\right)^{1/2}} = \frac{fIE - fE_{dR} + nIE - nE_{dR} + gIE}{IE - E_{dR}}$$

Following steps are performed to get from (10) to (11):

* Both sides equation are multiplied by $(-E_{dR})^{1/2}$
* K_{LAN} is taken to right side of equation and is entered into fraction

$$(11) fIE(-E_{dR})^{1/2} - f(-E_{dR})^{3/2} + nIE(-E_{dR})^{1/2} - n(-E_{dR})^{3/2} + gIE\left(-E_{dR}\right)^{1/2} + K_{LAN}E_{dR} - K_{LAN}IE = 0$$

(13) is obtained if change of variable (12) is considered and terms are grouped according to x exponent:

$$(12) x = \left(-E_{dR}\right)^{1/2}$$

$$(13) -(f + n)x^3 + K_{LAN}x^2 + IE(f + g + n)x - K_{LAN}IE$$

Cubic equation is solved by Cardano method as has been done in [2] to resolve LAN-RG equality. Brief explanation of Cardano method is made in [2]. In this case, E_{dR} is obtained (14) from (12). Subsequently, LAN (2), E_k (5) and FEC (1) are calculated to be able to verify the goodness of estimation by extrapolation against calculated in reference [6].

$$(14)\ E_{dR} = -(x)^2$$

SPA linear trend that defines atoms with experimental dates [6] (from Beryllium to Neon) is with legend "1s2s" in **Figure 5**. Lithium is very close to linear trend and is in fact included in following jump ($1s^2 \rightarrow 1s3s$). Helium has greater linearity displacement. Data provided as calculated by [6] are indicated with legend "1s2s C" and have been entered corresponding to atoms of third and fourth period. High approximation to linearity by third period and somewhat smaller of fourth period can be observed.

Extrapolation calculations from LAN-SPA equality are located in **Table 5** with Actual Change of E_k or AC(E_k) (15) and % Relative Change of E_k or %RC(E_k) (16). E_k from LAN-SPA equality is $E_{k\text{-SPA}}$. Empty cells in "E_k [6]" column are due to data absence in [6].

$$(15)\ \text{Actual Change of } E_k = AC(E_k) = \Delta = E_{k\text{-SPA}} - E_k$$

$$(16)\%RC(E_k) = \frac{(E_{k\text{ - SPA}} - E_k)}{E_k} * 100 = \frac{(E_{k\text{ - SPA}} - E_k)}{E_k} * 100$$

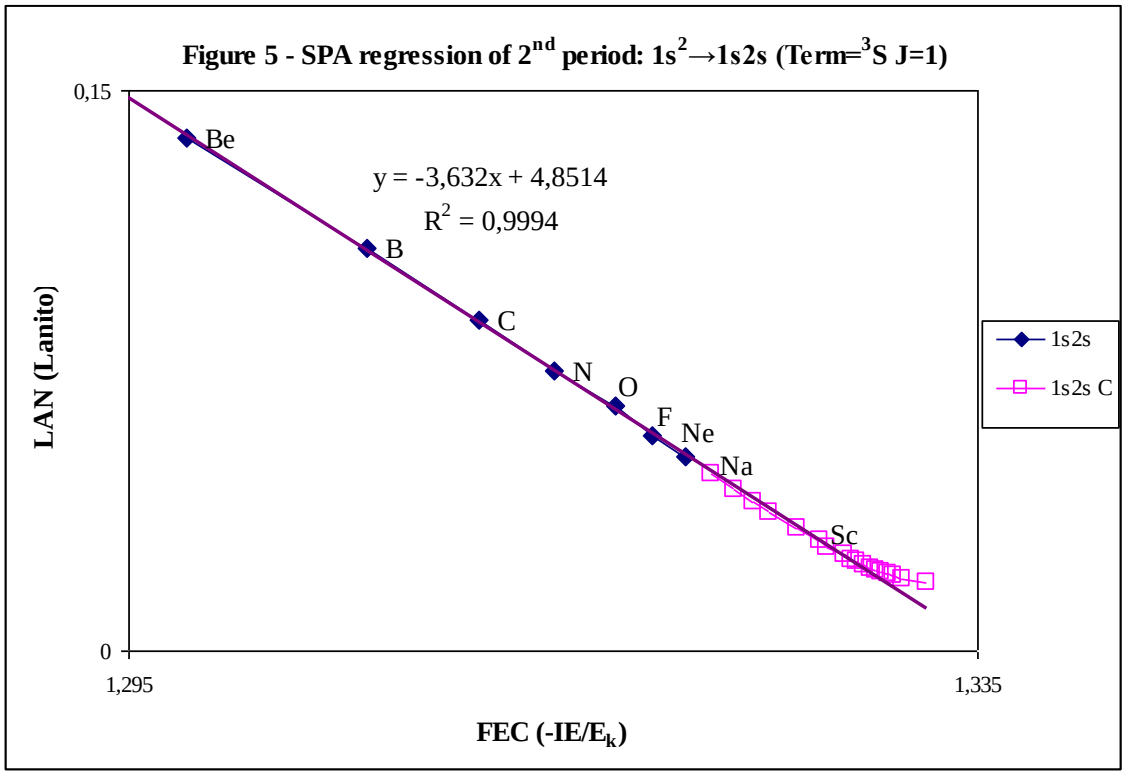


Table 5 - $1s^2 \rightarrow 1s2s$ (Term=^{3}S y J=1). AC(E_k) (15) and %RC(E_k) (16). SPA linear trend that defines atoms with experimental dates [6] (from Beryllium to Neon)				
Symbol	$E_{k\text{-SPA}}$	E_k [6]	AC(E_k) (15)	%RC(E_k) (16)
Na	1107,70142	1107,8445	-0,1431	-0,01292%
Mg	1330,92656	1331,1112	-0,1846	-0,01387%
Al	1574,74723	1574,9788	-0,2316	-0,01470%
Si	1839,14483	1839,4227	-0,2779	-0,01511%
P	2124,24576			
S	2430,00958	2430,3477	-0,3381	-0,01391%
Cl	2756,66777			

Ar	3104,00405	3104,1486	-0,1446	-0,00466%
K	3471,95017	3472,2889	-0,3387	-0,00976%
Ca	3860,94963			
Sc	4271,01048	4271,023	-0,0125	-0,00029%
Ti	4702,04948	4701,9618	0,0877	0,00186%
V	5154,18758	5153,8842	0,3034	0,00589%
Cr	5627,49509	5626,9125	0,5826	0,01035%
Mn	6122,05361	6121,1296	0,9240	0,01510%
Fe	6637,94041	6636,5964	1,3440	0,02025%
Co	7175,24407	7173,4008	1,8433	0,02570%
Ni	7734,04893	7731,6136	2,4353	0,03150%
Cu	8314,45584	8311,3278	3,1280	0,03764%
Zn	8916,55515			
Ga	9540,45546	9535,7672	4,6883	0,04917%
Ge	10186,2594			
As	10854,078			
Se	11544,0317			
Br	12256,2327			
Kr	12990,8204	12979,3068	11,5136	0,08871%

$1s^2 \rightarrow 1s3s$ (Term=^{3}S y J=1) is a case very similar to than seen in $1s^2 \rightarrow 1s2s$. R^2=0,9971 is obtained if all atoms of second period ([Li,Ne]) are taken because there are small deviations in E_k of O and F, although this linear regression is the chosen because both deviations are compensated and linear trend is not almost modified. R^2=0,9998 if both are removed.

Table 6 is made with $1s^2 \rightarrow 1s3s$ (Term=^{3}S y J=1) in analogy to Table 5 with 1s2s destiny. Additionally, atoms of second period are collected to corroborate that O and F are only slightly deviated from linearity. Likewise, both **Figure 6** and Table 6 show an even smaller deviation in atoms of third and fourth period between $E_{k\text{-}SPA}$ (E_k from LAN-SPA equality) and E_k from reference [6].

Figure 7 is dedicated to $1s^2 \rightarrow 1s4s$ (Term=^{3}S y J=1) and excellent correlation between SPA linearity and reference data is proved. There are fewer atoms with data in [6] as n increases and therefore Figure 7 shows some more absences.

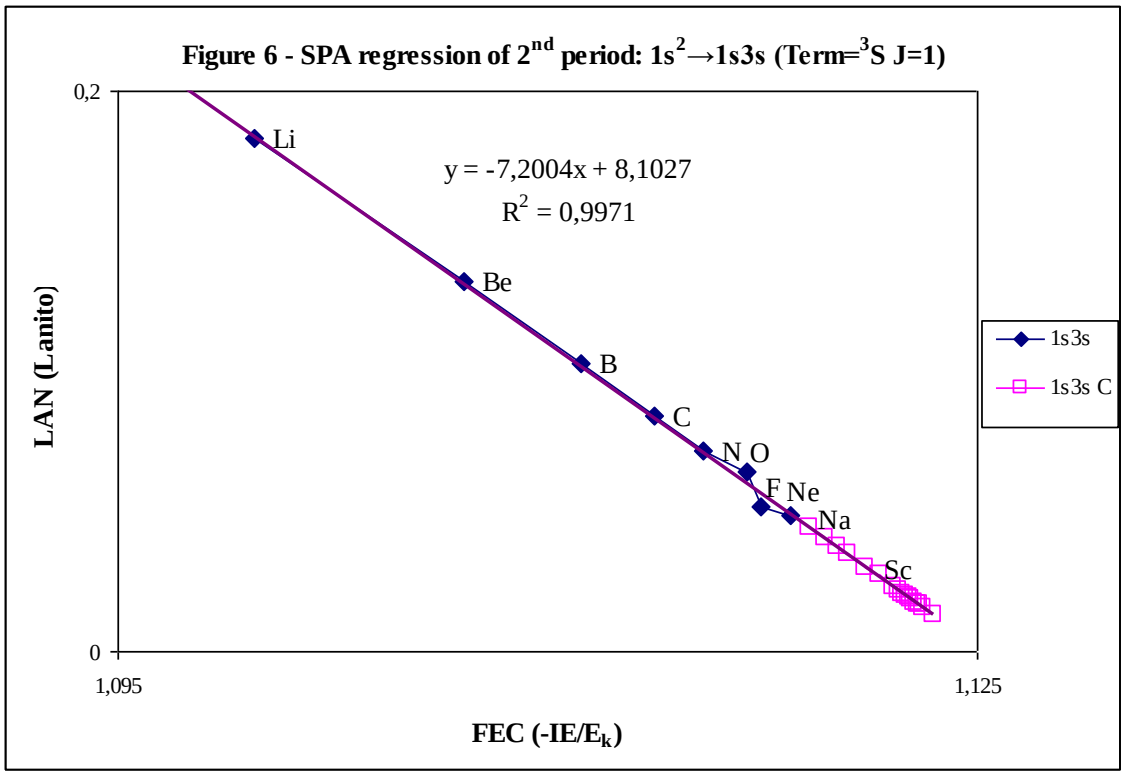


Figure 6 - SPA regression of 2nd period: 1s2→1s3s (Term=3S J=1)
0,2
0
1,095
1,125
LAN (Lanito)
FEC (-IE/Ek)
y = -7,2004x + 8,1027
R2 = 0,9971
Li
Be
B
C
N
O
F
Ne
Na
Sc
1s3s
1s3s C

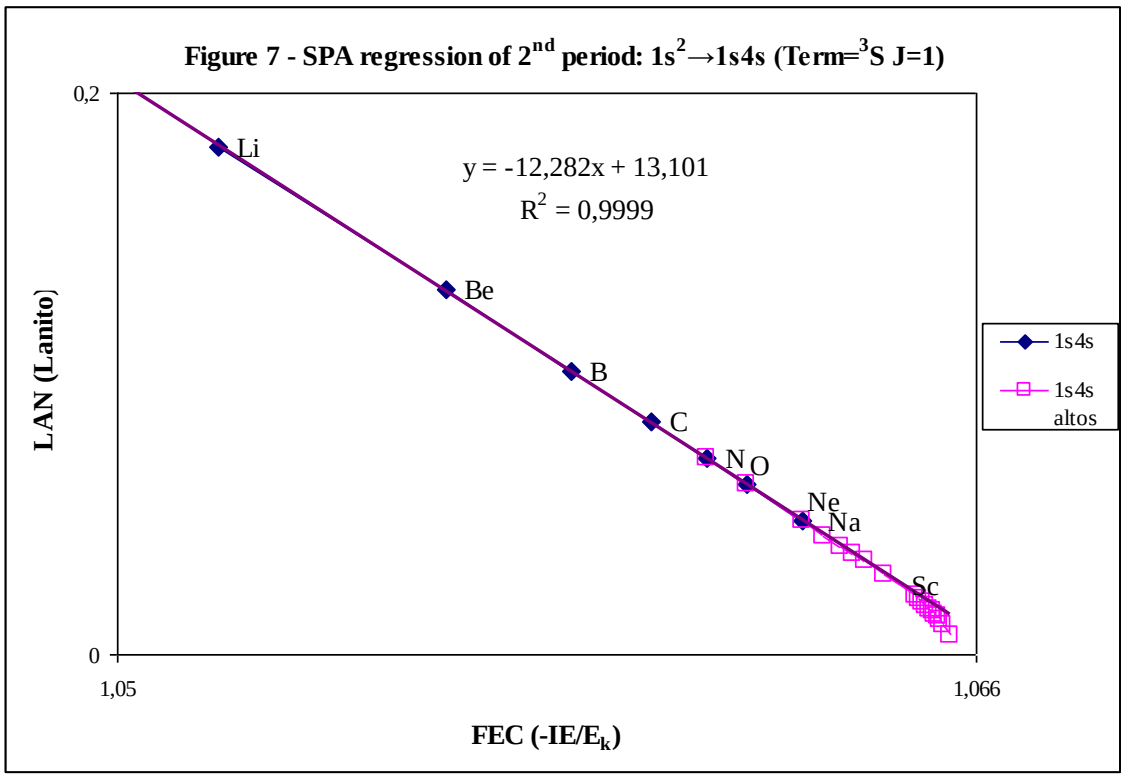


Figure 7 - SPA regression of 2nd period: 1s2→1s4s (Term=3S J=1)
0,2
0
1,05
1,066
LAN (Lanito)
FEC (-IE/Ek)
y = -12,282x + 13,101
R2 = 0,9999
Li
Be
B
C
N
O
Ne
Na
Sc
1s4s
1s4s altos

Table 6 - $1s^2 \rightarrow 1s3s$ (Term=^{3}S y J=1). $AC(E_k)$ (15) and $\%RC(E_k)$ (16). SPA linear trend that defines atoms with experimental dates [6] (from Lithium to Neon)				
Symbol	$E_{k\text{-}SPA}$	E_k [6]	$AC(E_k)$ (15)	$\%RC(E_k)$ (16)
Li	68,77769	68,780785	-0,0031	-0,00450%
Be	139,01359	139,0091	0,0045	0,00323%
B	233,438214	233,43	0,0082	0,00352%
C	352,075341	352,06227	0,0131	0,00371%
N	494,937362	494,9276	0,0098	0,00197%
O	662,046693	661,92931	0,1174	0,01773%
F	853,429182	853,6424	-0,2132	-0,02498%
Ne	1069,1086	1069,1157	-0,0071	-0,00066%
Na	1309,14409	1309,1424	0,0017	0,00013%
Mg	1573,50182	1573,5045	-0,0027	-0,00017%
Al	1862,2935	1862,3	-0,0065	-0,00035%
Si	2175,50039	2175,5177	-0,0173	-0,00080%
P	2513,26732			
S	2875,55151	2875,5857	-0,0342	-0,00119%
Cl	3262,61717			
Ar	3674,22314	3674,069	0,1541	0,00420%
K	4110,29477			
Ca	4571,3374			
Sc	5057,36317	5057,392	-0,0288	-0,00057%
Ti	5568,28197	5568,3671	-0,0851	-0,00153%
V	6104,23448	6104,326	-0,0915	-0,00150%
Cr	6665,30424	6665,403	-0,0988	-0,00148%
Mn	7251,58807	7251,687	-0,0989	-0,00136%
Fe	7863,17782	7863,289	-0,1112	-0,00141%
Co	8500,17873	8500,4	-0,2213	-0,00260%
Ni	9162,6909	9162,8	-0,1091	-0,00119%
Cu	9850,834	9850,941	-0,1070	-0,00109%
Zn	10564,7155			

Ga	11304,4643	11304,5667	-0,1024	-0,00091%
Ge	12070,2023			
As	12862,0612			
Se	13680,1841			
Br	14524,7045			
Kr	15395,787	15395,825	-0,0380	-0,00025%

Silpovgar II: Leap to jump globality. Relation between SPA equation and n

Slope (g) and Y-intercept (f) of Silva de Peral y Alameda (3) or (6) are linearly related to n principal quantum number.

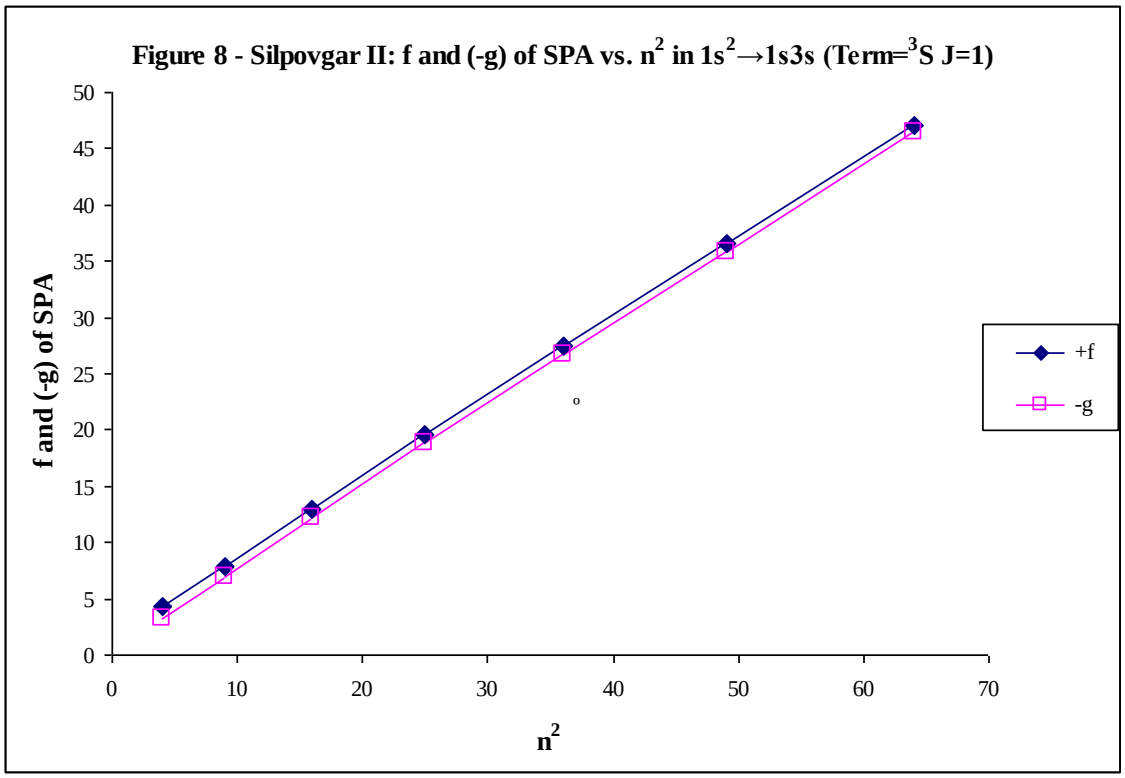
All atoms and for any excited state destiny n in specific electron jump may be related with Silpovgar II. Relation of Silva de Peral y Alameda is referred to one single excited state and to all atoms and Silpovgar II allows globalization to any destiny n.

Relation of Silva de Peral y Alameda (3) or (6) in $1s^2 \rightarrow 1sns$ (Term=^{3}S y J=1) holds that Slope (g) and Y-intercept (f) are linearly related to n^2. Silpovgar II relation data are in **Table 7**. Slope (g) and Y-intercept (f) are taken from Table 4. Slope(g) is changed sign in **Figure 8** to be able to represented with Y-intercept in the same quadrant.

Linear regressions are optimal. R^2=1.00000 for (-g) vs n^2 and R^2=0,9999 for f vs. n^2 if n=[2,4], i.e. for first three n destiny. Equally excellent is R^2=0.9999 for f and (-g) vs. n^2 for all n with reference [6], i.e. for n=[2,8]

Table 7 - Silpovgar II: Slope (g) and Y-intercept (f) of SPA vs. n^2 in $1s^2 \rightarrow 1sns$ (Term=^{3}S y J=1) with n=[2-8] and for atoms from He to Ne

Configuration	n^2	f (lanito)	g (lanito)
1s2s	4	4,2886	-3,2026
1s3s	9	7,8268	-6,9518
1s4s	16	12,988	-12,176
1s5s	25	19,535	-18,756
1s6s	36	27,407	-26,649
1s7s	49	36,601	-35,857
1s8s	64	47,145	-46,412



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[2] Javier Silvestre. LAN plains for Tete Vic Equation. Sent to: http://vixra.org/author/javier_silvestre

[3] Javier Silvestre. Relation of Riquelme de Gozy: LAN lineality with energy of excited states. Sent to: http://vixra.org/author/javier_silvestre

[4] Javier Silvestre. Relation of Flui Piep de Garberí: LAN^{-1} and Ionization Energy. Sent to: http://vixra.org/author/javier_silvestre

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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. 10, 11, 12 and 13 are [1] [2] [3] [4] respectively. 14 is present article.

Abbreviation	10	11	12	13	14	Meaning
AC	X		X	X	X	Actual Change
BES	X	X		X	X	Born Electronic System
E_d	X	X				Excited state destiny energy

E_{dA}			X			Destiny Energy deduced with Xorrador Approximation
E_{dI}		X				Excited state destiny energy obtained from ideal E_d
E_{dR}		X	X		X	Reference destiny energy
E_{dRI}		X	X			Ideal E_{dR} obtained from extrapolation of others E_{dR} satisfying Relation of Riquelme de Gozy
E_{dS}		X				Excited state destiny energy in Serelles Secondary Line
E_J	X	X				Jump energy in Torrebotana Central Line
E_{JA}			X			Jump Energy deduced with Xorrador Approximation
$E_{J,R}$	X					Referenced E_J to IE
E_{JS}		X				Jump energy in Serelles Secondary Line
E_k	X	X	X		X	Reference Jump energy
$E_{k,R}$	X					Referenced E_k to IE
$E_{k\text{-}SPA}$					X	E_k from LAN-SPA equality
E_o	X	X	X	X	X	1s OES Ionization energy
E_{oT}				X		1s theoretical ionization energy
EC					X	Energetic correlation in SPA
FE				X		Flui Equilibrium
FEC					X	Fundamental Energetic Correlation
FG				X		Flui Group
FPG					X	Relation of Flui Piep de Garberí
El	X	X				Es, Ep, Ed and Ef are energies to reach ns, np, nd & nf
IE	X	X	X	X	X	Ionization energy
IE_{FLUI}				X		IE estimated with Relation of Flui Piep de Garberí
l	X	X	X	X		Orbital quantum number
LAN	X	X	X	X	X	Serelles Secondary Lines Factor
LAN_I LAN_{RI}		X				Ideal LAN obtained from E_d or E_{dRI}
LAN_R		X	X		X	LAN with reference data
$LAN_{R,M}$		X				LAN_R with modification
LAN_s				X		LAN(P50) used for any electron configuration
LAN(P50)		X	X	X		Initial LAN value in ns to ns jump. LAN with IE
n	X	X	X	X	X	Principal quantum number
$n_{initial}$ or n_s		X	X	X	X	n of non-excited electron
NIN	X			X		Negative in negative
OES	X	X		X	X	Origin Electronic System
RC	X		X	X	X	Relative Change
RG					X	Relation of Riquelme de Gozy
SPA					X	Relation of Silva de Peral y Alameda

z	X					Effective nuclear charge
Z	X			X	X	Atomic Number
z_{CT}	X	X				Excited state charge
z_o	X	X	X	X	X	1s Origin charge according to P46
z_s	X	X	X	X	X	Start charge according to P46
z_{SS}		X				Serelles secondary charge

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	03	Relations between electronic extremes: Rotation time as probability and Feliz I.
	04	Feliz II the prudent: Probability radial closure with high order variable C_F
	05	Feliz III The King Major: Orbital filled keeping Probability electronic distribution.
	06	Feliz IV Planet Coupling: Probability curves NIN coupling from origin electron.
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	22	Electron Probability: PUB C_{PEP} II in "Flui BAR" (Flui (BES A (Global Advance) Region)
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	24	Electron Probability: 1s electron birth: The last diligence to Poti Rock & Snow Hill Victoria
24 hours of new day		

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