ARTICLE 22

Electron Probability: PUB C_{PEP} II in "Flui BAR" (Probability Union Between C_{PEP} II in Flui(BES A (Global Advance) Region)

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ABSTRACT

This is 22nd article of 24 dedicated to atomic model based on Victoria equation (Articles index is at end). P44 Necessary NIN Relationships is introduced with $C_{POTI-AL}$ division as a line to be deepened and implies that Electronic Systems values [6-8] follows trends along nuclear charge [09]. [10] is the first part for PUB C_{PEP} treatment and considers C_{PEP} breakdown whose Advance presents atomicity and sensitivity to IE variations (P75).

Second part in PUB C_{PEP} presents two main lines related to NIN:

* P79 establishes simple arithmetic equations between C_{PEP} and elements related (C_{PEP-i}, A and A_i)
* P80 (A)→0 stays in Flui BAR where electron configurations reach Global Advance equal to 0 at specific Z intervals

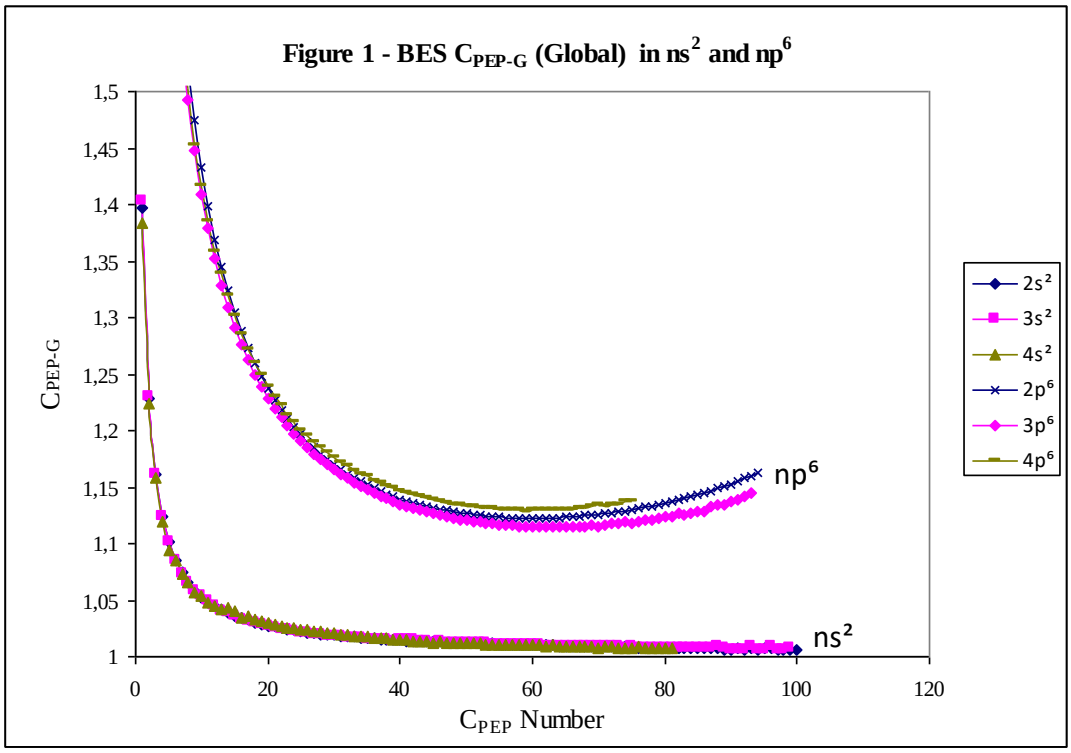
KEYWORDS

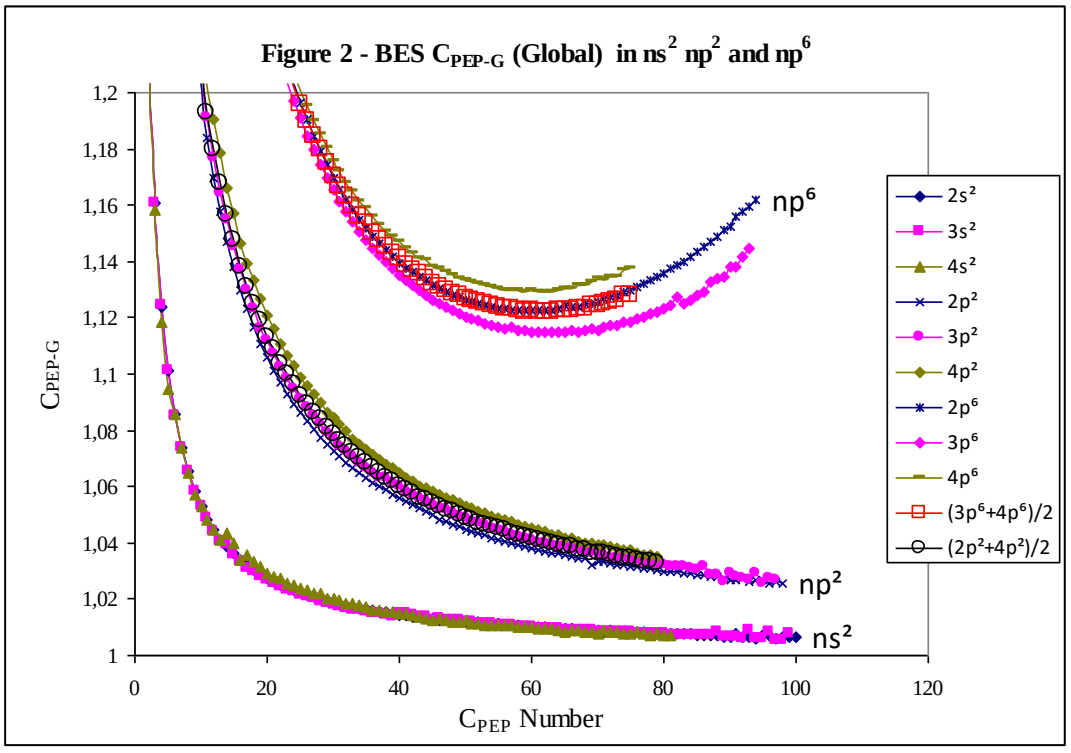
OES, BES, Necessary NIN relationships, PUB C_{PEP} , Flui BAR, Global Advance (A), Z limit and Victoria Equation.

INTRODUCTION

C_{PEP-G} vs. C_{PEP-G} number curves comply atomicity and different BES present same morphology in curves and groupings when n is increased. C_{PEP-G} is general C_{PEP} and for this reason is also simply called C_{PEP}. Curves are located in same zone regardless of their n (**Figure 1**). Two furthest BES (ns^2 and np^6) are drawn to avoid excess curves and improve visualization. Abbreviations Table is at end article.

Low C_{PEP} (C_{PEP}=[1,1.2]) are focused on **Figure 2** where, in addition, np^2 BES are incorporated. Figure 1 is corroborated with Figure 2, but Y-axis enlargement allows to observe slight separation between curves as n function. These separations are related by P79.





P79 C_{PEP}, C_{PEP-i}, A and A_i: Linear relations between n

Four factors related to passage from geometric coupling to probabilistic (C_{PEP}, C_{PEP-i}, A and A_i) couple BES atomicity of different n by direct overlap or by simple arithmetic

operation. Four factors are derived from C_{PEP} concept introduced in P42, C_{PEP} as adapted Probability between lobes pair, [6] and developed in [10]. Two P79 examples by simple arithmetic operation with np^2 (1) and np^6 (2) C_{PEP} are in Figure 2. **Table 1** summarizes these two examples together with others that are seen later.

Table 1 – Examples of P79 C_{PEP}, C_{PEP-i}, A and A_i: Linear relations between n			
BES	Factor	Operation	Figure
np	C_{PEP-i}	$3p = \frac{2p + 4p}{2}$	In later article
np^2	A and C_{PEP}	$3p^2 = \frac{2p^2 + 4p^2}{2}$	2 and 7
np^3	C_{PEP-i}	$2p^3 = \frac{3p^3 + 4p^3}{2}$	In later article
np^6	C_{PEP}	$2p^6 = \frac{3p^6 + 4p^6}{2}$	2

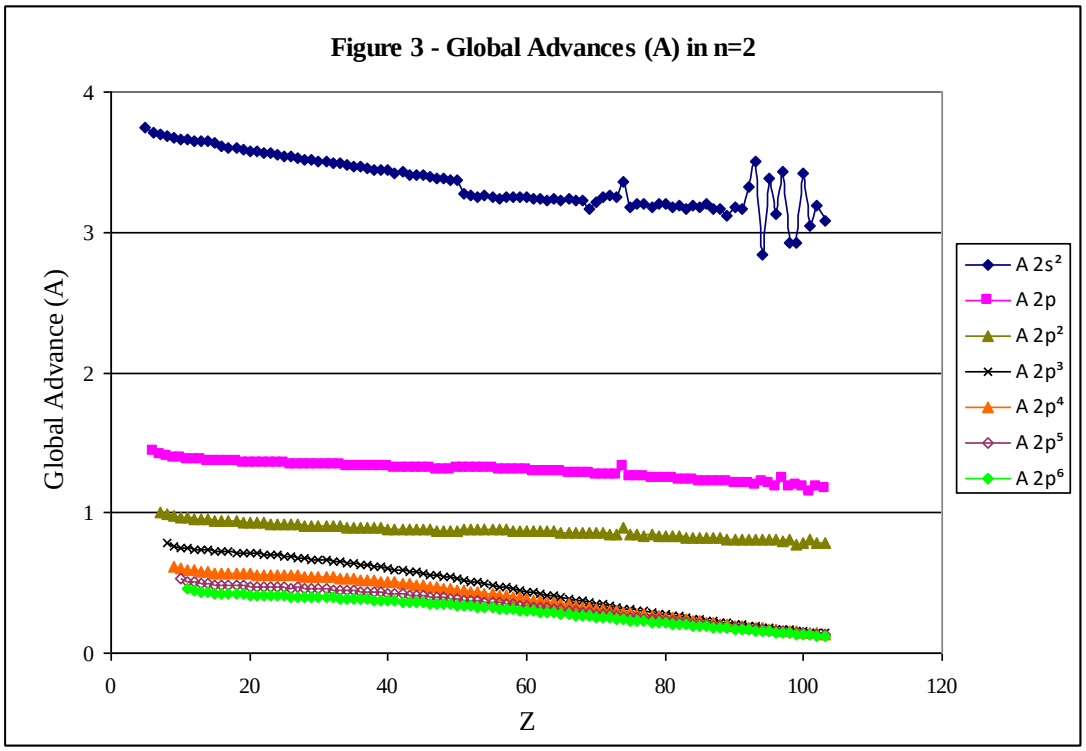
$$(1)\ 3p^2 = \frac{2p^2 + 4p^2}{2}$$

$$(2)\ 2p^6 = \frac{3p^6 + 4p^6}{2}$$

Global Advance (A) also allows extracting information related to Necessary NIN relationships introduced in [9] and continued in [10] where focus is mainly directed to C_{PEP}. Advance (A) formula (3) is included in [10] which, with intrinsic variations to work with individual C_{PEP} or C_{PEP-i}, is applicable to Individual Advance or A_i.

$$(3)\ A = \frac{\frac{2}{C_{PEP} - 1} - S}{Z - Zo} = \frac{\frac{2}{\sqrt{\frac{(E_o)_O}{(E_o)_B}} - 1} - S}{Z - Zo} = \frac{2}{\left(\sqrt{\frac{(E_o)_O}{(E_o)_B}} - 1\right)(Z - Zo)} - \frac{S}{Z - Zo}$$

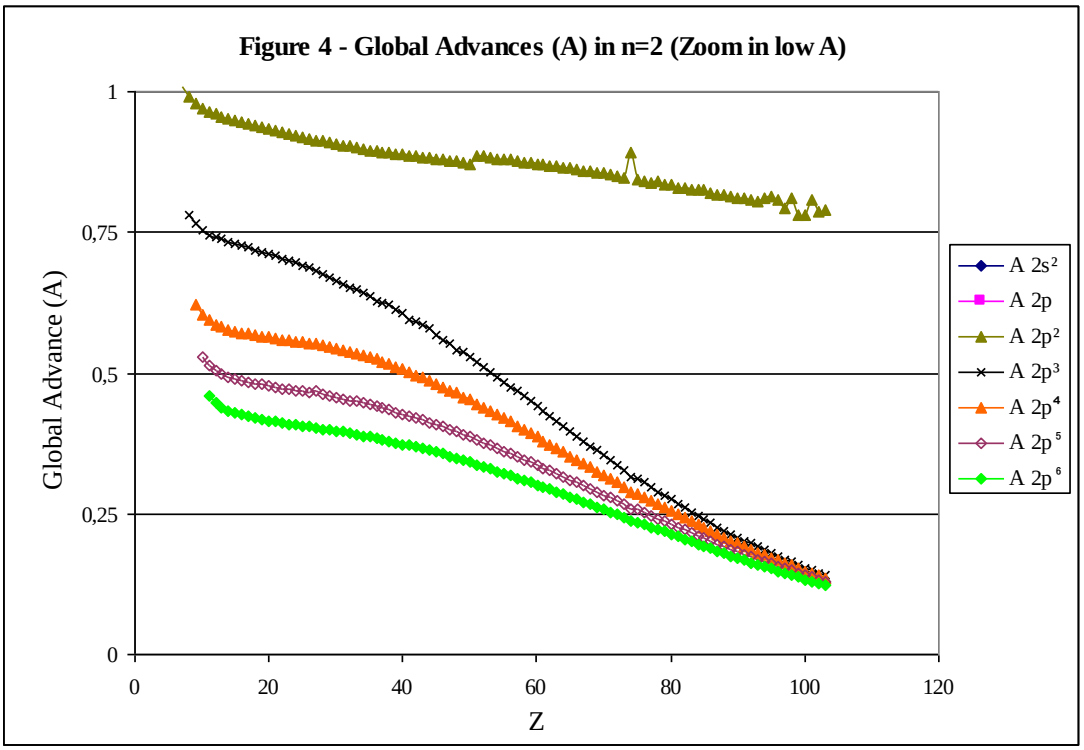
Global Advance for Born Electronic System (BES A) vs. Z in n=2 is represented in **Figure 3**. **Figure 3.B** and **Figure 3.C** show similar curves for n=3 y n=4 respectively (Both included in **Annex**).



Low Global Advances area (A=[0,1]) is enlarged in **Figure 4** and is highlighted:

a) $2p^2$ has smooth and almost linear drop with small step over Z≈50. This staggering is observed with $2s^2$ and, in Figure 3.B and 3.C in some BES. Discontinuities, and their possible cancellation due to reference data errors, are subsequently analyzed briefly.

b) BES group from $2p^3$ to $2p^6$ whose curves converge as Z increases. This convergence seen in Figure 4, which is Figure 3 enlargement, is intuited for groups from np^3 to np^6 with n=3 (Figure 3.B) and n=4 (Figure 3.C).



In three Figure 3, all curves show continuous descent with Z and, independently of n, are located in similar A vs. Z zones. **Figure 5.A** and **Figure 5.B** are used to analyze A vs. Z position of first Advance and either specific atom (Figure 5.A) or Advance number (Figure 5.B). Advance range for each BES of n=[2,4] are delimited by first Global Advance (indicated as "BES", for example "np^3") and Global Advance of specific atom or Advance number (as "BES II", for example "np^3 II"). Intervals represented are:

a) Figure 5.A: between first A and Yb (Z=70).

b) Figure 5.B: between first A and closure is marked by Global Advance of C_{PEP} number 65th. For example, 65th Global Advance for $2s^2$ BES is when Z=70, but, 65th A for 2p, $3s^2$ or $4s^2$ is when Z=71, Z=78 and Z=96 respectively.

Figure 5.A - Global Advance uniform movement with destiny in Z=70

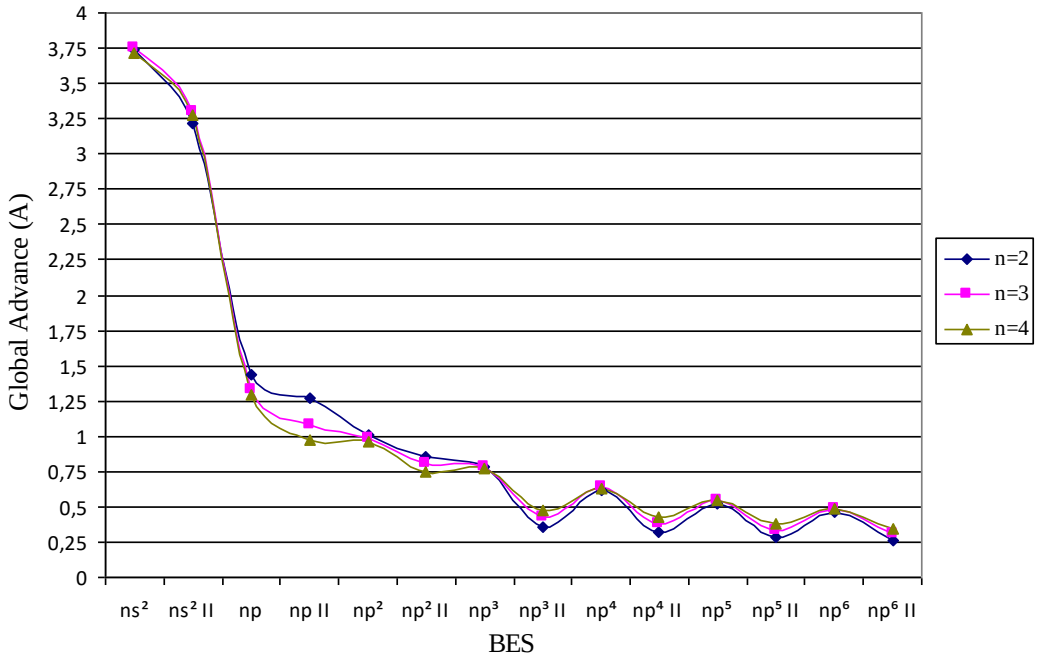
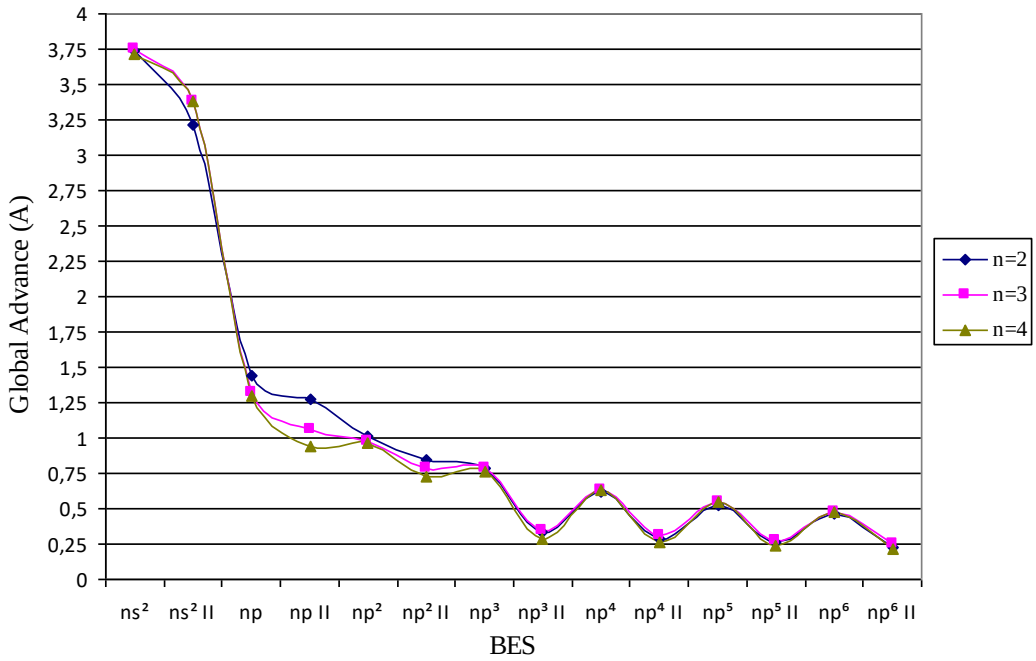
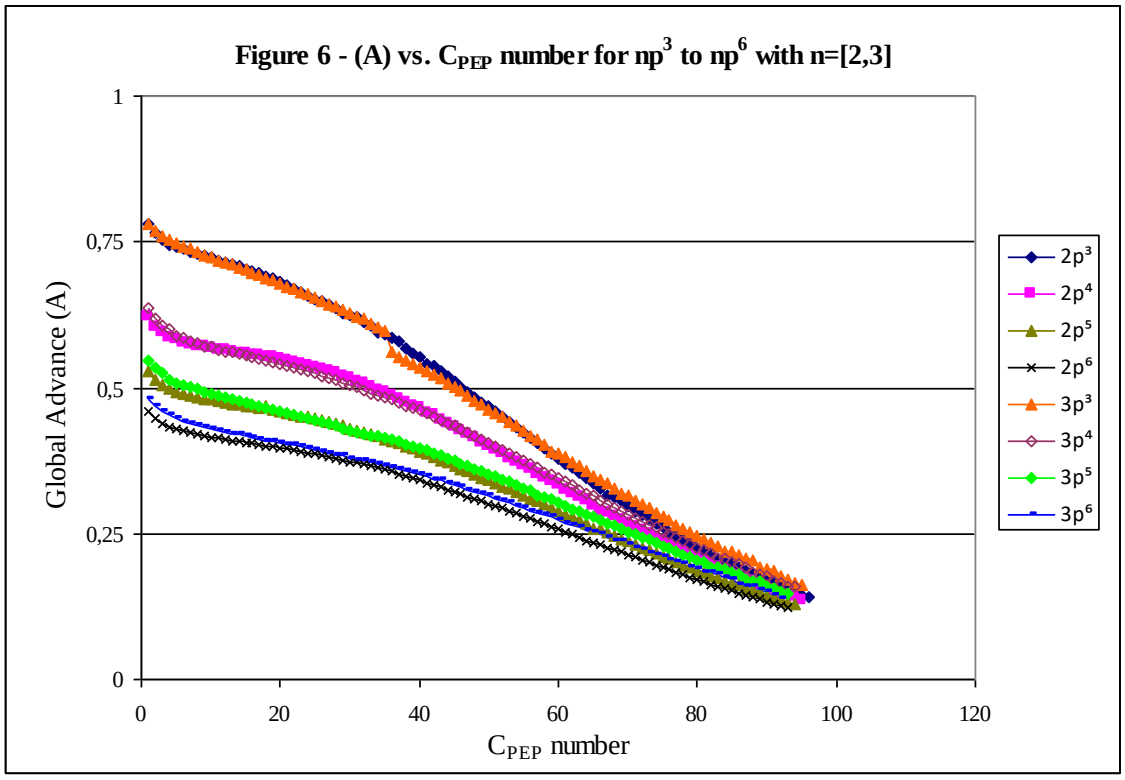


Figure 5.B - (A) uniform movement with destiny in (A) number = 65th



Global Advance specific location in BES function is corroborated with both criteria used in Figure 5.A and 5.B Criteria change has most prominent nuance in BES from $2p^3$ to $2p^6$ where there is greater overlap when is considered C_{PEP} number (Figure 5.B) instead of working with specific atom (Figure 5.A). Illustration of this greater overlap is carried out in **Figure 6** where A BES vs. C_{PEP} number from np^3 to np^6 with n=[2,3] is represented.

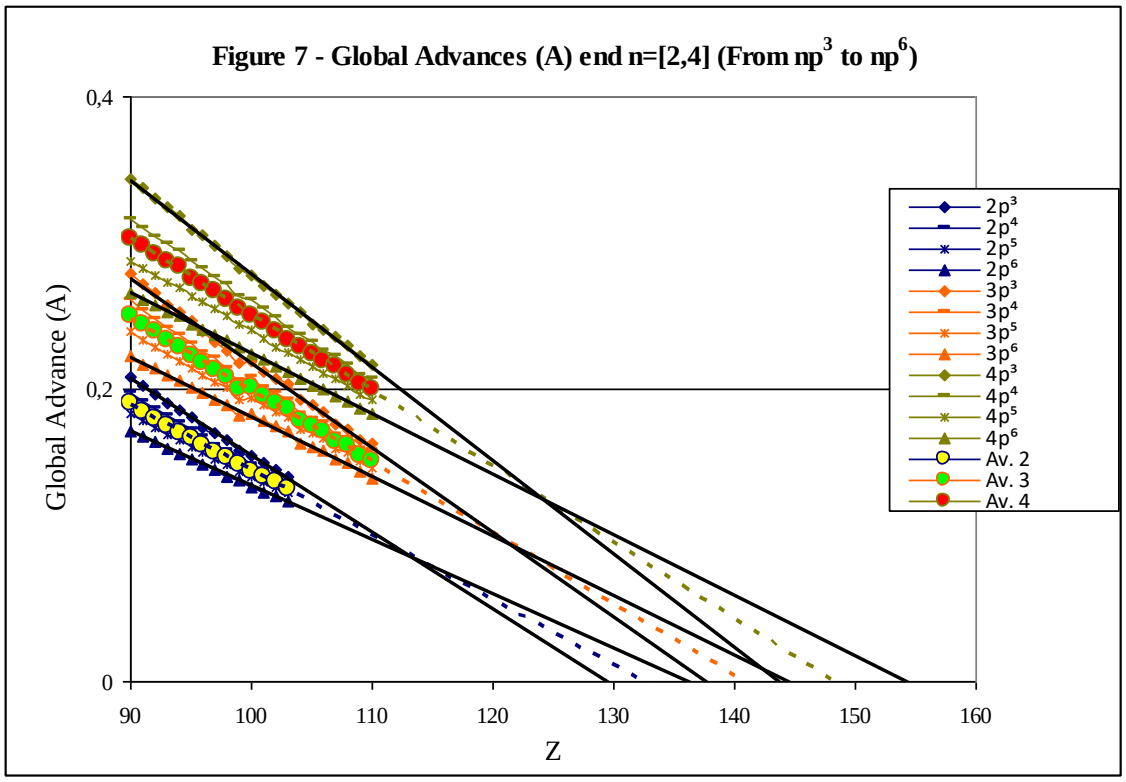


P80 (A)→0 stays in Flui BAR

Global Advance for most BES tends clearly to zero when Z increases and meets:

- Location in "Flui BAR" (BES A (Global Advance) Region)
- Global Advance (A) of groups from half-full to full orbital (np^3 to np^6, nd^5 to nd^{10} and nf^7 to nf^{14}) converges when (A)→0.

The earliest BES that achieve null Global Advance or A=0 are tetra driven by change produced on np^3 (tetra formed by np^3 to np^6), as is evident in three Figure 3. X axis of **Figure 7** is Atomic Number (Z) because Z is searched when A=0.



12 BES along with arithmetic mean of each n are in **Figure 7**. Arithmetic mean is represented as Av. and 2, 3 or 4 is n principal quantum number. Points of said arithmetic means are interspersed between 4 BES with good linear tendencies in Z interval studied (Z≥90): R^2 equal to 0.9989, 0.9973 and 0.9994 for n=2, 3 and 4 respectively. Coefficients R^2 are considered correct since intervals are of high Z. Separation between arithmetic means is approximately Z≈8 (Av. 2=132.6 Av. 3=140.8 and Av. 4=148.2) which is equal to electrons number involved ns^2np^6 configuration.

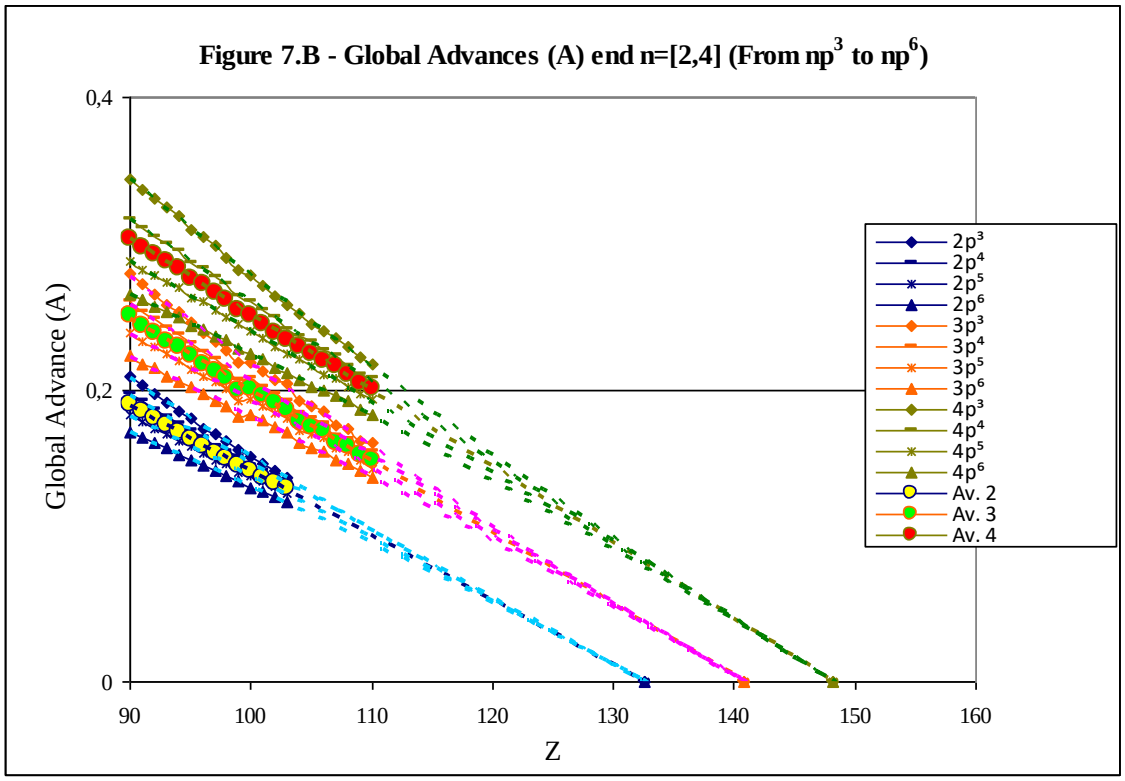
General equation of arithmetic mean for consecutive np^x combination with atomic number indicated as Z=k is given by (4). General equation of arithmetic mean for nl^x with BES from half-full to full shell (np^3 to np^6, nd^5 to nd^{10}, nf^7 to nf^{14}…) is transformed to (5). Example with Au and from half-full to full 3d is expressed in (6):

$$(4)\ \left(\text{Av. np}^{[i,j]}\right)_{Z=k} = \frac{\sum_{x=i}^{j} A\left(np^x\right)}{j-i+1}$$

$$(5)\ \left(\text{Av. nl}^{[i,j]}\right)_{Z=k} = \frac{\sum_{x=1+2l}^{x=2(1+2l)} A\left(nl^x\right)}{2(1+l)}$$

$$(6)\ \left(\text{Av. nd}^{[5,10]}\right)_{Z=79} = \frac{\sum_{x=5}^{x=10} A\left(3d^x\right)}{6} = \frac{A\left(3d^5\right)+A\left(3d^6\right)+A\left(3d^7\right)+A\left(3d^8\right)+A\left(3d^9\right)+A\left(3d^{10}\right)}{6}$$

Figure 7 shows linear trends for Advance Global of individual BES although its intuited behaviour is second-degree polynomial with completion at X-intercept point defined by arithmetic mean (**Figure 7.B**).



As z_s represented is high, selected configuration is that corresponding to progressive closure of n quantum numbers. This selected configuration is supported by reference [11]. For example, consecutive order for 78 Pu XVI electrons is (7):

(7) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^{10}\ 4s^2\ 4p^6\ 4d^{10}\ 4f^{14}\ 5s^2\ 5p^6\ 5d^{10}$

Consecutive order is not the one indicated by Periodic Table (8):

(8) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^2\ 4d^{10}\ 5p^6\ 6s^2\ 4f^{14}\ 5d^8$

Extended consecutive order is given by (9) and is applied throughout article:

(9) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 3d^{10}\ 4s^2\ 4p^6\ 4d^{10}\ 4f^{14}\ 5s^2\ 5p^6\ 5d^{10}\ 5f^{14}\ 5g^{18}\ 6s^2\ 6p^6\ 6d^{10}\ 6f^{14}\ 6g^{18}\ldots$

Therefore, enough atoms with consecutive order must be available to extrapolate Z when A→0 by linear trend of arithmetic mean (5). $5d^{10}$ is last one that can be studied because even Ds (Z=110), which is highest Z with reference data [11], inserts $6s^2\ 6p^6$ before $5f^{14}$.

Initial Z has slight discontinuities from $4p^3$ to $4p^6$ and are larger from $5p^3$ to $5p^6$ because consecutive order (9) has not been obtained yet. This fact also implies that first Advance or Start Point (S) corresponds to BES that is not correct and Z extrapolation when A→0 has error. For example, $5p^3$ BES for Tb (Z=65) with 65 electrons is $[Xe]4f^96s^2$ and W X (that is, atom with Z=74) must be reached to get configuration with least energetic electrons in $5p^3$: $[Cd]4f^{14}5p^3$. Actually, Z must be something superior because W X does not yet have internal configuration with consecutive order.

BES Start point (S) energy is incorrect from 3d if only reference data [11] is considered. Way to minimize error is use ionization energy estimated with Relation of Flui Piep de Garberí : LAN^{-1} and Ionization Energy [12].

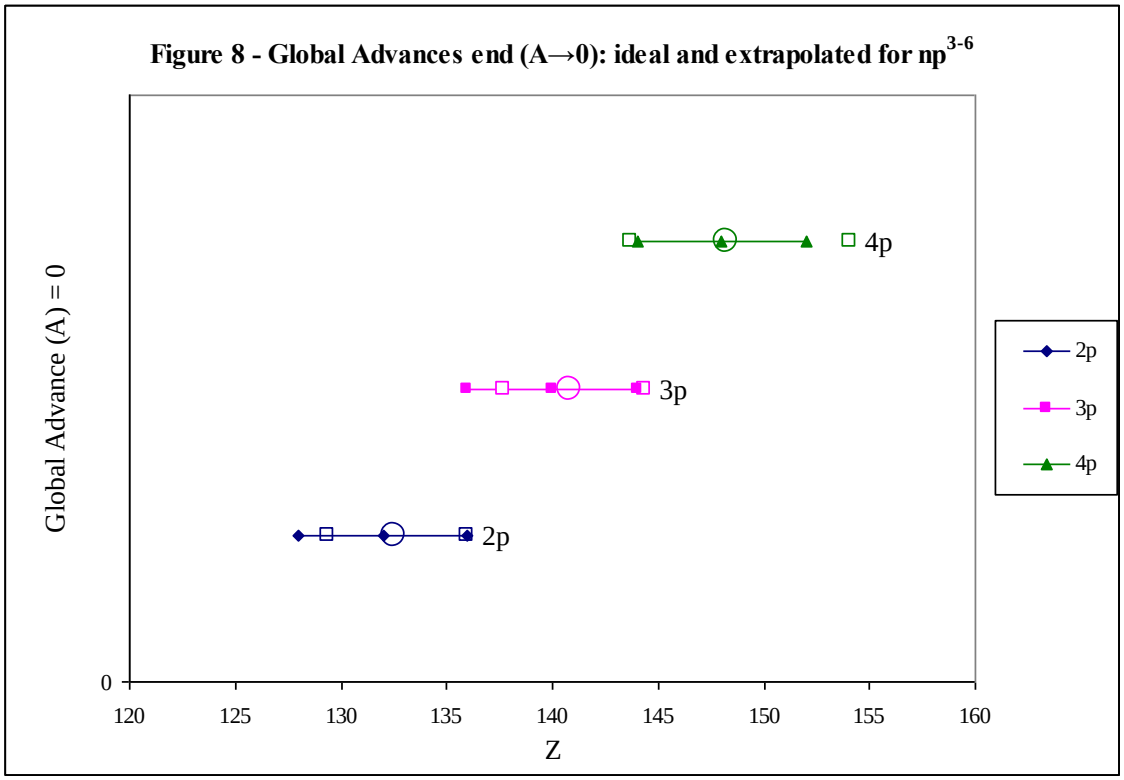


Figure 8 is alternative representation to view in Figure 7. All points in Figure 8 are ideal and extrapolated when Global Advance (A) tends to zero (A→0). Extrapolations are made with A when Z≥90 and linear regression as in Figure 7. Figure 8 includes:

a) Centre and two ideal ends for each BES quartet are drawn with legend symbols. 4p, in legend with green triangles, is for BES from $4p^3$ to $4p^6$ and their ideal ends are 144 and 152 while ideal average Global Advance is 0 when Z=148. Really important point is ideal average Global Advance because ends location has been questioned with two possibilities: Figure 7 and 7.B. In any case and in most cases, remarkable detail is that linear regressions of ends are correctly adjusted to assigned interval.

b) Z extrapolated with A→0: Z resulting from arithmetic mean (5) extrapolation along with Z of two ends (np^3 and np^6) are included with empty circles and squares respectively. In n=4 case, lower end whose A→0 is $4p^3$ and occurs when Z=143.7 ($Z_{A\to 0}$ ($4p^3$) = 143.7). This point marked with empty square is very close to ideal (144). 4 BES average is 148.2 ($Z_{A\to 0}$ ($4p^{3\text{-}6}$) = 148,2) is also adjacent to ideal average (148). Finally, other end ($4p^6$) is something more deviated from ideal: $Z_{A\to 0}$ ($4p^6$) = 154.1 vs. ideal end = 152. Deviations with 2p and 3p are even smaller.

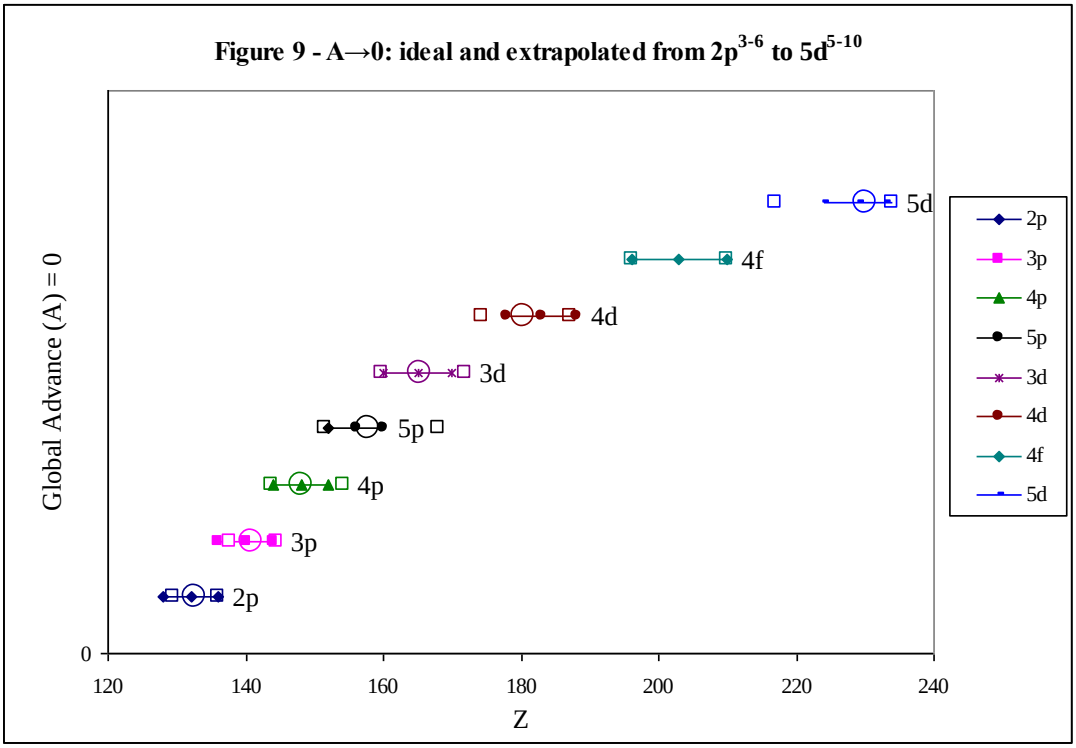


Figure 9 enlarges Figure 8 and includes all BES that meets consecutive order (9) with data [11]. Linear regressions are extrapolated till Z with A→0. Following aspects are underlined:

a) Different groups are not mixed and located along X axis (Atomic Number) with following Z order (10):

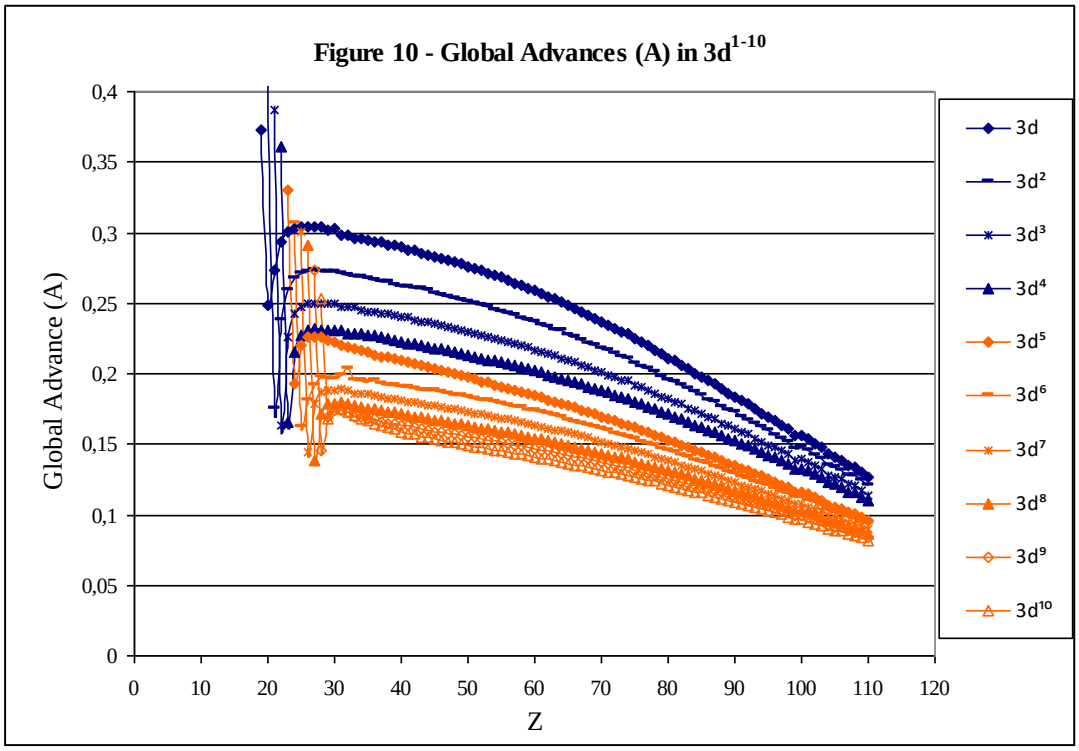
(10) $2p^{3\text{-}6} < 3p^{3\text{-}6} < 4p^{3\text{-}6} < 5p^{3\text{-}6} < 3d^{5\text{-}10} < 4d^{5\text{-}10} < 4f^{7\text{-}14} < 5d^{5\text{-}10}$

b) $5p^{3\text{-}6}$ is just behind $2p^{3\text{-}6}$ $3p^{3\text{-}6}$ and $4p^{3\text{-}6}$. Lower end ($5p^3$) and arithmetic mean are correctly embedded in $5p^{3\text{-}6}$ ideal range [152,160]. As happens with $4p^6$, $5p^6$ is more displaced. Several causes must be investigated:

* Error with IE when Z≥90 [11]. Point supported by decrease in linearity due to discontinuities (**Figure 7.C** in **Annex**): $5p^6$ linear regression has R^2=0.9652 which is quite worse that R^2=0.9994 for $4p^6$.
* Error with Start Point by different configurations as has been commented before. Different electron configurations until reaching correct consecutive order (10) cause discontinuities in first Global Advances as can be seen in **Figure 3.D** (**Annex**) and its comparison with Figures 3.A 3.B and 3.C

* Error in linear trends application method (Figure 7 vs. 7.B)

c) 3d block is located behind np^{3-6} blocks with n=[1,4] that occupy interval Z=[128,160] (Z=128+4*8=128+32=160). Ideal assigned interval for 3d is [160,170] because its capacity is 10 electrons and therefore 165 is ideal mean value that provides null Global Advance: Ideal $Z_{A\rightarrow 0}$ ($3d^{5-10}$) =165



Global Advance behavior is used to select blocks and, as happens with np^3 energetic variation, now nd^5 [(2+4*l)/2=(2+8)/2=5] is inflection point that implies separation in two blocks: from nd to nd^4 (nd^{1-4}) and from nd^5 to nd^{10} (nd^{1-10}) (**Figure 10**). Linear regression is performed for all d^{1-10} BES with Z≥90: $3d^{1-10}$ and $4d^{1-10}$ are in **Figure 7.D** and **Figure 7.E** respectively (**Annex**). Two 3d blocks converge their linear tendencies on Z≈130 and corroborate their separate location since said confluence is made with different Global Advance. Similarly, $4d^{1-4}$ and $4d^{5-10}$ confluences are with Z≈140. Outermost blocks (in this case, outermost blocks are $3d^{5-10}$ and $4d^{5-10}$) has been considered in Figure 9.

Linear regressions extrapolations are:

$Z_{A\rightarrow 0}$ ($3d^5$) = 159.8 (vs. lower ideal end = 160)
$Z_{A\rightarrow 0}$ ($3d^{5-10}$) = 165,4 (vs. ideal average = 165)
$Z_{A\rightarrow 0}$ ($3d^{10}$) = 171,9 (vs. higher ideal end = 170)

d) $6p^{3-6}$ case. $6p^{3-6}$ could have been located following route marked from $2p^{3-6}$ to $5p^{3-6}$ (Z=[128,160]). That is, $6p^{3-6}$ behind Z=160 and with Z=[160,168] as defined ideal interval, but this $6p^{3-6}$ situation does not seem feasible because this interval is occupied by 3d block (previous point with Figure 7.C and 9). Concrete $6p^{3-6}$ location can not be resolved with reference data [11] because [11] does not reach $6p^{3-6}$ fulfilling consecutive order (9).

e) $4d^{5-10}$, $4f^{7-14}$ y $5d^{5-10}$ are linear regressions extrapolations for blocks after $3d^{5-10}$ following consecutive order (9) and that have not yet been included. These blocks location is Z>170 (Figure 9). Extrapolations are well localized with some exception: $4f^{7-14}$ average and lower end of $4d^{5-10}$ and especially of $5d^{5-10}$. There are some holes in Figure 9 that are covered hypothetically with blocks as shown in **Figure 11**. Z Interval when A→0 with ideal or hypothetical and those obtained through linear regressions extrapolations of reference data [11] are summarized in **Table 2**. Z interval includes average and lower and higher end. Hypothetical are indicated as (HIP) in Table 2 and Figure 11.

Table 2 – Z Interval when A→0 with ideal or hypothetical and obtained through linear regressions extrapolations of reference data [11]

No.	Block	Ideal or hypothetical			Extrapolation		
		Lower	Average	Higher	Lower	Average	Higher
1	$2p^{3-6}$	128	132	136	129,4	132,5	136,0
2	$3p^{3-6}$	136	140	144	137,7	140,8	144,4
3	$4p^{3-6}$	144	148	152	143,7	148,2	154,1
4	$5p^{3-6}$	152	156	160	151,5	157,8	168,0
5	$3d^{5-10}$	160	165	170	159,8	165,4	171,9
6 (HIP)	$6p^{3-6}$	170	174	178	Hypothetical		
7	$4d^{5-10}$	178	183	188	174,2	180,3	187,2
8 (HIP)	$7p^{3-6}$	188	192	196	Hypothetical		
9	$4f^{7-14}$	196	203	210	196		210
10 (HIP)	$5f^{7-14}$	210	217	224	Hypothetical		
11	$5d^{5-10}$	224	229	234	217	230	233
12 (HIP)	$5g^{9-18}$	234	243	252	Hypothetical		
13 (HIP)	$6f^{7-14}$	252	259	266	Hypothetical		
13	$1s^2$ (*)		259			≈260	

(*) $1s^2$ is discussed in comments of Figure 11. Last block considered, $6f^{7-14}$, with n≥2 meets: $Z_{A\to 0}$ ($6f^{7-14}$) ≈ $Z_{A\to 0}$ ($1s^2$)

Figure 11 - A→0: ideal and extrapolated from $2p^{3-6}$ to $6f^{7-14}$

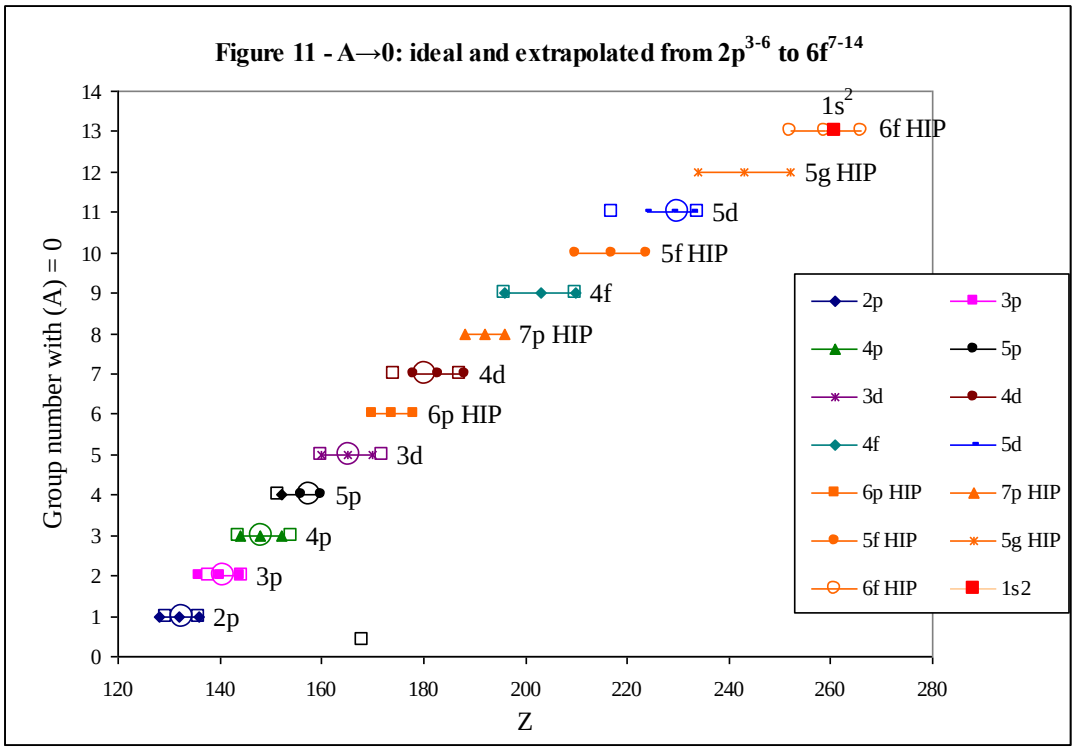
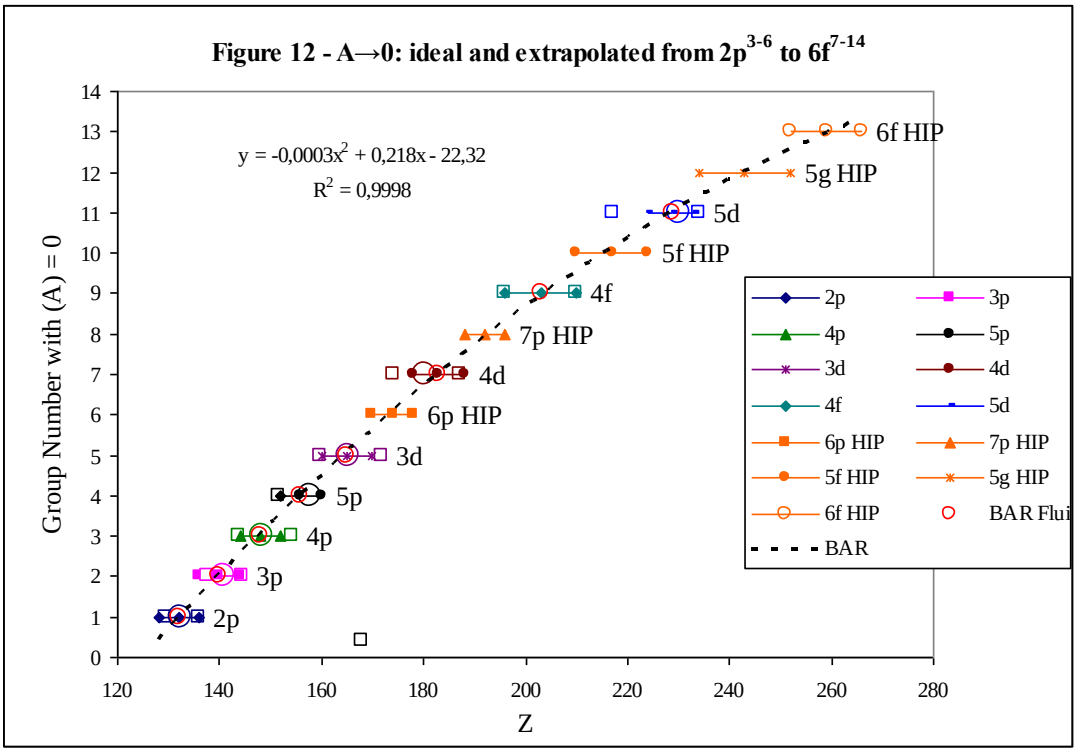


Figure 12 - A→0: ideal and extrapolated from $2p^{3-6}$ to $6f^{7-14}$



Ideal average points, that practically coincide with obtained through linear regressions extrapolations of reference data [11], are united by second degree polynomial regression. Regression coefficient is excellent: R^2=0.9998. In addition, hypothetical blocks are located on path marked by second degree polynomial regression. In fact, hypothetical blocks inclusion maintains R^2=0.9998. Hypothetical blocks are: $6p^{3-6}$ $7p^{3-6}$

$5f^{7-14}$ $5g^{9-18}$ and $6f^{7-14}$. In Figure 11 and 12, these hypothetical blocks are marked as HYP (Hypothetical) and colored orange to be differentiated from the rest.

Total implicated atoms number in Figure 11 and 12 is 138 and are disaggregated in corresponding n principal quantum number (**Table 3**).

Tabla 3 - Implicated atoms in Flui BAR by n							
n	2	3	4	5	6	7	[2,7]
ΔZ	8	18	32	50	22	8	138

Flui BAR closure hypothesis with 138 atoms, plus two corresponding to $1s^2$ and therefore 140 atoms, is indirectly supported by:

a) Z=138 for n≥2 can be o be near limit or maximum of Figure 12 curve. Second degree polynomial regression slope begins to decay and possibly only two more blocks can be inserted before reaching maximum point. These two blocks must have very high electron capacity to enter curve of second degree polynomial regression, ≈28 for first and ≈40 for second, and consequently exceed capacity of 6h hypothetical block (22 electrons).

b) $1s^2$ BES Advance [10] in n=1 is the only one that can be studied for $1s^x$ electrons since 1s is OES (without Advance) and none of two, 1s or $1s^2$, has more internal lobes than the one corresponding to n=1. $1s^2$ Linear regression extrapolation of reference data [11] is Z≈260 (**Table 4**), $Z_{A\to 0}$ $(1s^2) \approx 260$, as has been included in Table 2. $Z_{A\to 0}$ $(1s^2)$ is more prominent because $A(1s^2)$ is very great even for highest atom with data [11]. For example, Global advances (A) when Z=100 are:

$A(1s^2) \approx 2.4$
$A(2p^6) \approx 0.13$
$A(4d) \approx 0.18$

Therefore, $Z_{A\to 0}$ $(1s^2)$ extrapolation is really affected by small deviations of point with which linear regression is made.

Table 4 - R^2 of linear regression and estimated $Z_{A\to 0}$ $(1s^2)$ with several Z intervals		
Z interval	R^2	$Z_{A\to 0}$ $(1s^2)$
[90,100]	0,9982	266
[91,100]	0,9983	264
[92,100]	0,9988	261
[93,100]	0,9985	263
[94,100]	0,9987	260

[95,100]	0,9992	256
[96,100]	0,9998	260
[97,100]	0,9999	259
[98,100]	0,9997	258

c) Z limit of first origin orbital or origin orbital par excellence, 1s OES, is estimated ≈138.5 in following article by means $C_{POTI-AL}$ [5] when d→∞. Minimum combination that exceeds this Z limit (1s) ≈ 138.5 is exposed one: 138+2 =140. 138 correspond to n=[2,7] (Table 3) and other 2 correspond to n=[1].

Bibliography

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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 is [10] and 22 is present article.

Abbreviation	[7]	[8]	[9]	21	22	Meaning
3-PA(x,y)				X		3-point alignment(n,Group)
A				X	X	Advance (A or C_{PEP} A). Related with x and S.
A_i					X	Individual Advance
A_E				X		Estimated Advance (A)
BES	X	X	X	X	X	Born Electronic System
c_i	X	X	X	X		EE Orbital circumference
C_F		X	X			Wavelength compaction factor
C_{MON}	X					C_F without C_{POTI}
C_{PEP}	X	X	X	X	X	Probability electrons pair coefficient
C_{PEP-G}				X	X	Global C_{PEP} and usually written simple as C_{PEP}
C_{PEP-i}				X	X	Individual C_{PEP} (BES is referred to the next energetic BES)
C_{POTI}	X	X	X			Probabilistic Orbital Tide in Third Feliz Solution
C_{PEP} number				X	X	C_{PEP} number following Z growth
$C_{POTI-AL}$	X	X	X	X	X	C_{POTI} Angular Limit
$C_{POTI-GAL}$		X				C_{POTI} Geometric Angular Limit
$C_{POTI-LAG}$		X				C_{POTI} Lobe always growing
d	X	X	X			Birth wavelength division or simply, division
EE	X	X	X	X		Electronic extreme
E_o	X	X	X			Initial, birth or output energy
$((Eo)_B)_E$				X		Estimated born E_o
E.S.				X		Electronic System (Lobe)
E_i		X				EE energy
F	X					Constant f multiplied by z
Flui BAR					X	Flui BES A (Global Advance) Region
GNC	X	X	X			Geometric NIN Coupling
ħ		X				Reduced Planck´s constant
H_i	X	X	X	X		EE Circular orbit height
IE	X	X	X	X	X	Ionization Energy
m_e		X				Electron mass
λ_{Birth} λ	X	X				Birth wavelength
MON	X	X	X			Modified Orbital Number
NIN	X	X	X	X	X	Negative in Negative (Electron in electron concept)

OES	X	X	X	X	X	Origin Electronic System
OPA		X				Orbital Planes Axis
P_i	X	X	X			EE Probability
PNC	X	X	X			Probabilistic NIN Coupling
PUB C_{PEP}				X	X	Probability Union Between C_{PEP}
r_i	X	X	X	X		Distance between nucleus and EE
S				X	X	Start Point meets: S=x
x				X		x equals to $2/(C_{PEP}-1)$
v_i		X				EE velocity
z	X	X	X			Effective nuclear charge
Z	X	X		X	X	Atomic number
Zo				X		Zo is matched with Start Atomic Number (S)
$Z_{A\rightarrow 0}$ (ES)					X	Z extrapolated with A→0 and (Electronic System)

ARTICLES INDEX

	19	Pepliz LAN Empire I: $LAN_{n\to\infty}$ vs. LAN(P50)
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Part III - NIN: C_{PEP} & C_{POTI}	21	Electron Probability: PUB C_{PEP} I (Probability Union Between C_{PEP}) - Necessary NIN relationships
	22	Electron Probability: PUB C_{PEP} II in "Flui BAR" (Flui (BES A (Global Advance) Region)
	23	Orbital capacity by advancement of numbers - Electron Probability: PUB C_{PEP} III: "Flui BAR" II and $C_{PEP\text{-}i}$
	24	Electron Probability: 1s electron birth: The last diligence to Poti Rock & Snow Hill Victoria
24 hours of new day		

ANNEX

Figure 3.B - Global Advances (A) in n=3

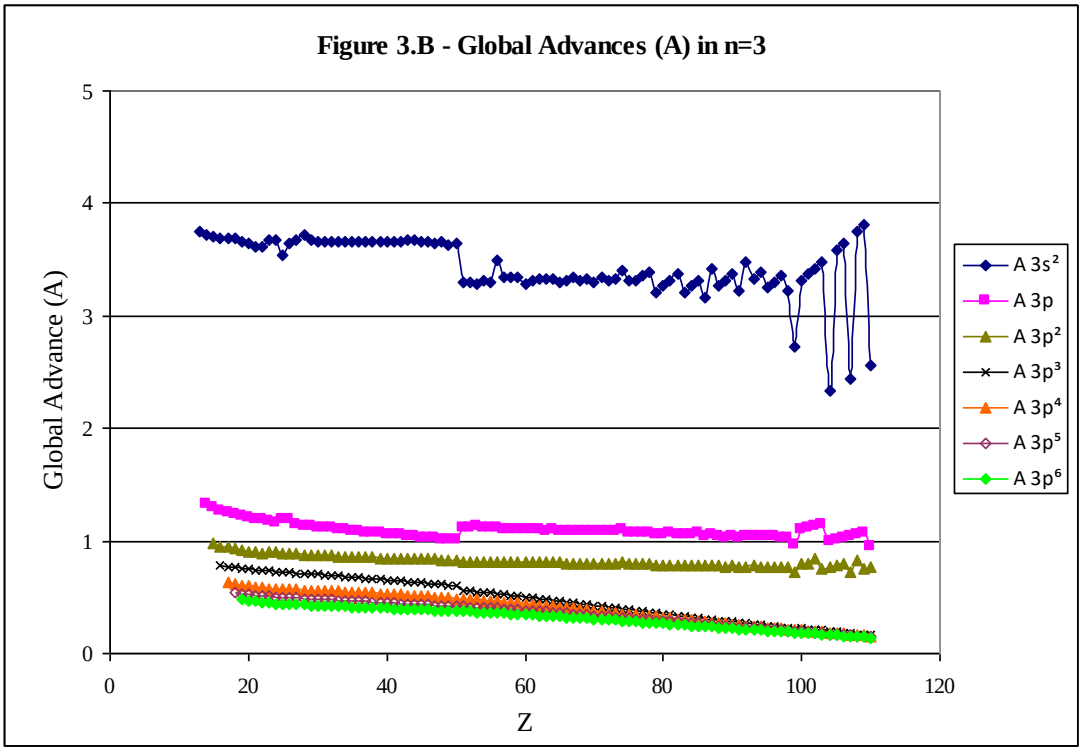


Figure 3.C - Global Advances (A) in n=4

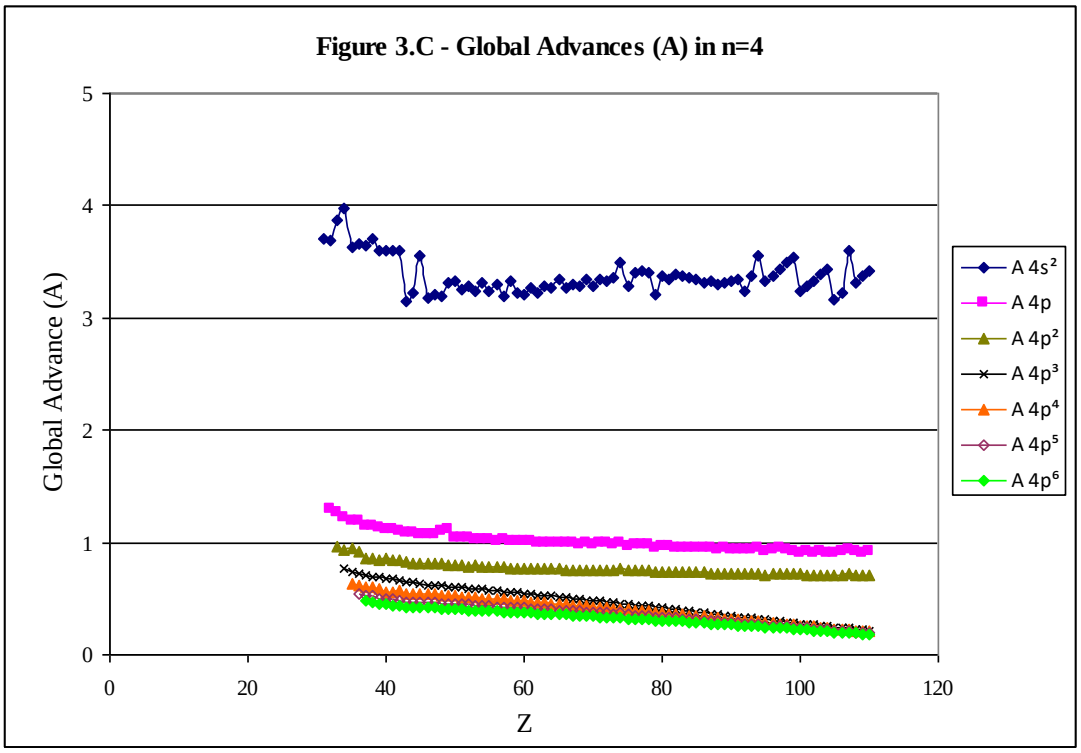
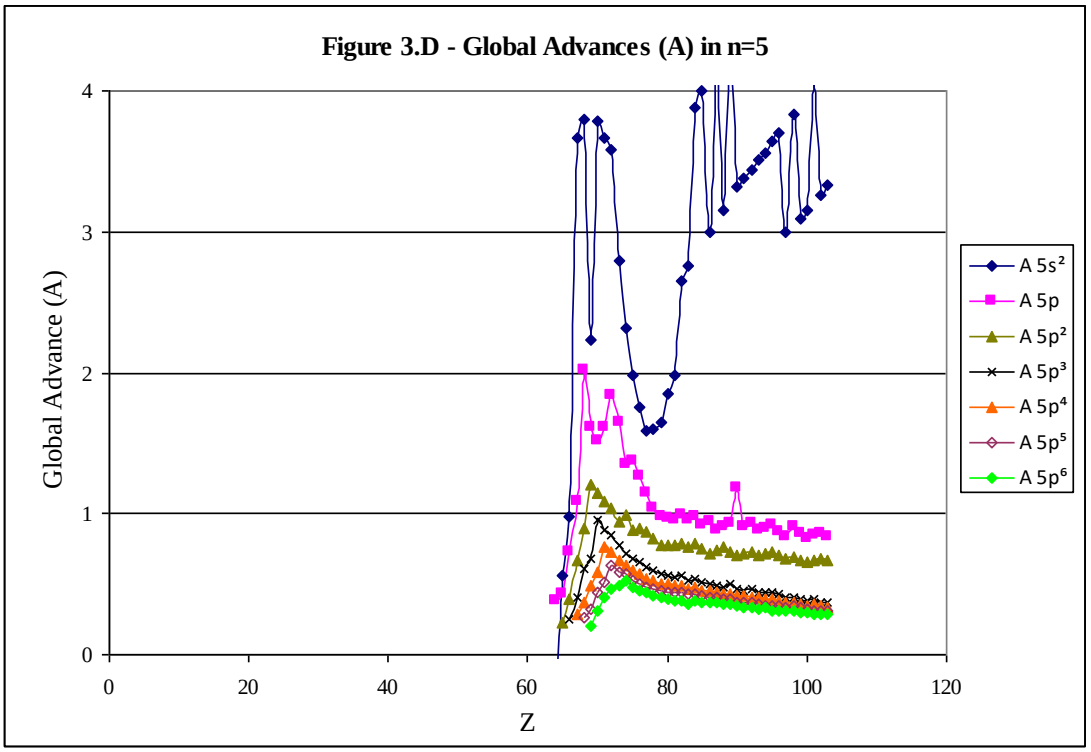


Figure 3.D - Global Advances (A) in n=5



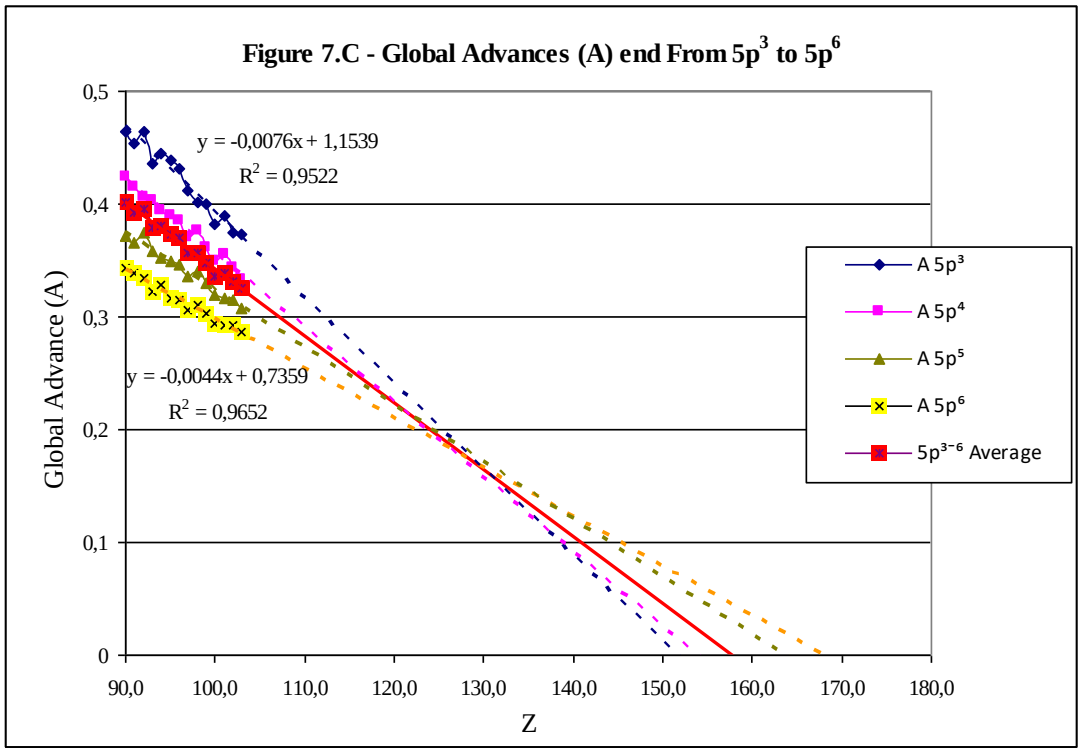


Figure 7.C - Global Advances (A) end From 5p3 to 5p6
0,5
0,4
0,3
0,2
0,1
0
Global Advance (A)
y = -0,0076x + 1,1539
R2 = 0,9522
y = -0,0044x + 0,7359
R2 = 0,9652
A 5p3
A 5p4
A 5p5
A 5p6
5p3-6 Average
90,0
100,0
110,0
120,0
130,0
140,0
150,0
160,0
170,0
180,0
Z

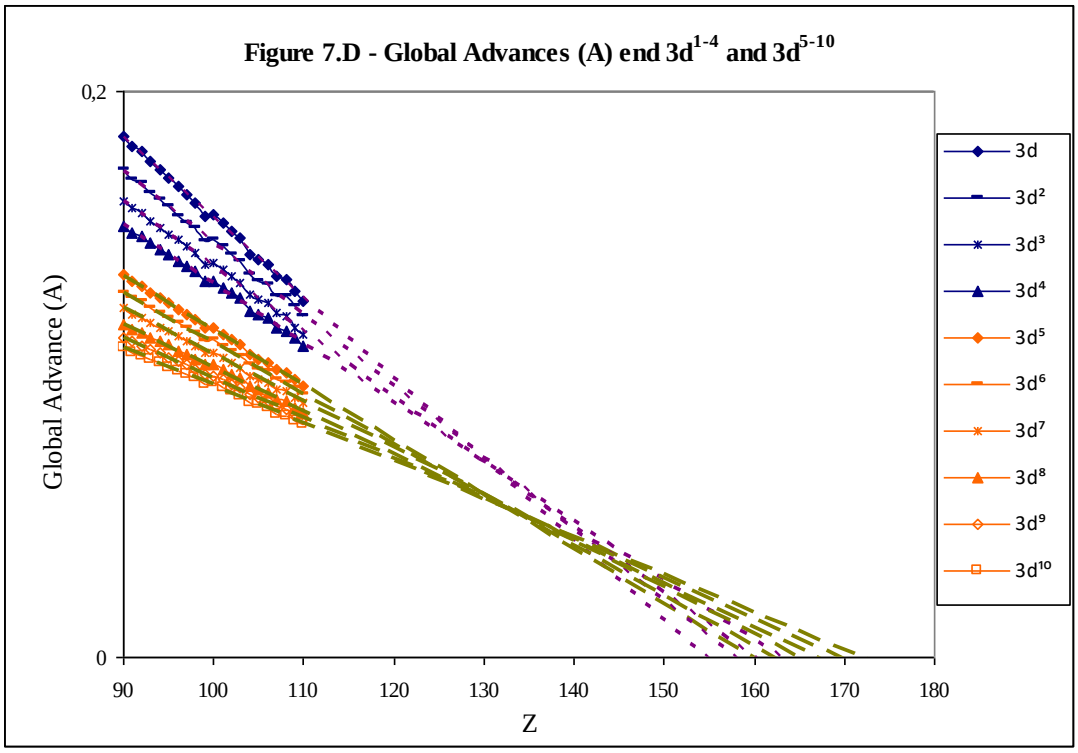


Figure 7.D - Global Advances (A) end 3d1-4 and 3d5-10
0,2
0
Global Advance (A)
3d
3d2
3d3
3d4
3d5
3d6
3d7
3d8
3d9
3d10
90
100
110
120
130
140
150
160
170
180
Z

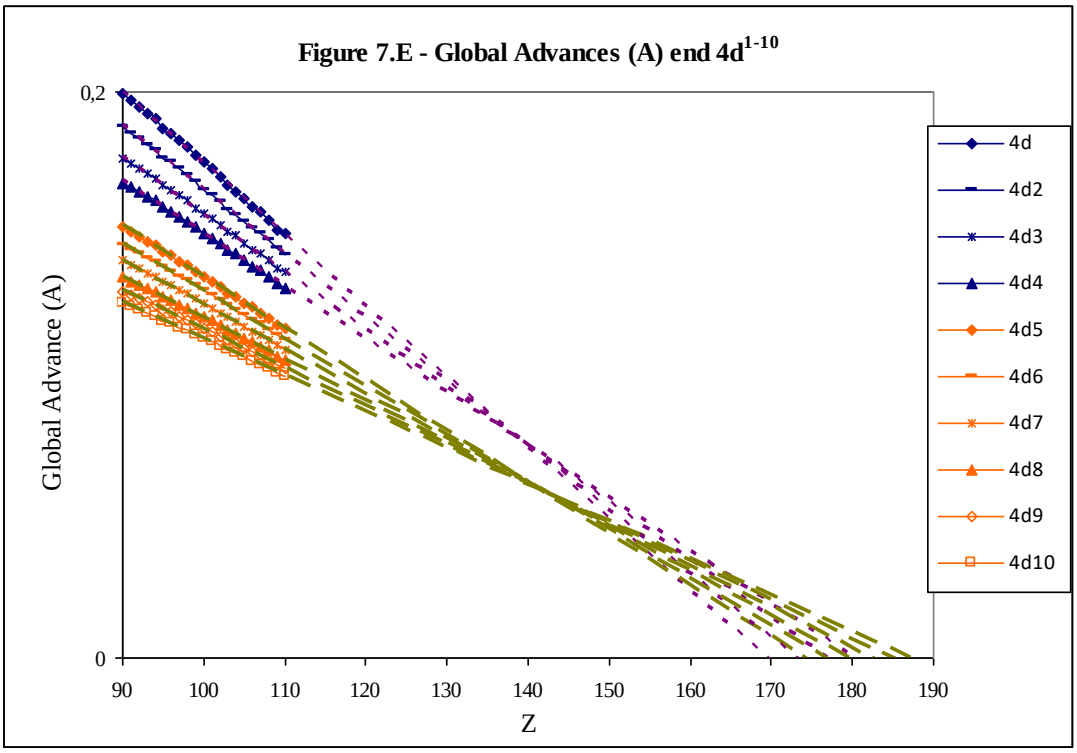


Figure 7.E - Global Advances (A) end 4d1-10
0,2
0
Global Advance (A)
90
100
110
120
130
140
150
160
170
180
190
Z
4d
4d2
4d3
4d4
4d5
4d6
4d7
4d8
4d9
4d10