$\begin{array}{c} {\bf He} \\ {\bf He} \\ {\bf Helium} \\ {\bf 4.002602(2)} \\ {\bf No} \\ {\bf Neon} \\ {\bf Neon} \\ {\bf 20.1797(6)} \\ {\bf 8} \\ {\bf Ar} \\ {\bf Argan} \end{array}$	<b>16</b> 3.00 4 <i>p</i> <b>Kr K K K K K K K K K K</b>	Xenon 131.293(6)	$\Pr_{(222)}^{86}$	$\log_{\substack{\text{Oganesson} \\ (294)}}^{7p}$
17 3.16 3p 18 Chorine Chorine Chorine Chorine Chorine Chorine Chorine	35 2.96 4p 36  Br Bromine Fr 79.901–79.907 8	53 2.66 5p 54  Lodine 126.90447(3)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7p 117 7p 118 (
8 3.44 2p 9 Oxygen 15.99903- 15.89977 16 2.58 3p 17 Sulphur	34 2.55 4p 35 Seenium 78.971(8) 79	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	84 2.0 6p 85 Po Polonium (209)	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4p 33 2.18 4p 34 AS nn Arsenic 174.921595(6)	5p 51 2.05 5p Sb Antimony 121.760(1)	6p 83 2.02 6p 84 Bismuth 208.98040(1)	$\sum_{\substack{\text{Moscovium} \ (289)}}^{7p}$
Carbon 12.0096–1.90 Silicon Silicon Ref25 O	4p 32 2.01 4p <b>Germanium</b> 72.630(8)	5p 50 1.96 5p Sn Tin 118.710(7)	$\Pr_{\text{Lead}}^{82} \stackrel{1.87}{\text{Pb}}$	$F_{\text{Flerovium}}$ Flerovium (289)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$G_{\rm allium}^{1.81}$	1.78 Indium 14.818(1)	81 1.62 6p Thallium 204.382- 204.385	
	$\sum_{\substack{\text{Zinc}\\ 65.38(2)}}^{30} 3d$	$\begin{matrix} 48 & \underline{1.69} & 4d & 49 \\ \mathbf{Cd} & & \\ \mathbf{Cadmium} \\ 112.414(4) & 1\end{matrix}$	$\mathbf{H}_{\mathrm{Mercury}}^{80}$	$\begin{bmatrix} 6d & 112 & 6d \\ & \mathbf{Cp} \\ & \mathbf{Cpernicium} \\ & (285) \end{bmatrix}$
	3d 29 1.90 3d* 30 Copper (S.546(3)	${\mathop{\bf Ag}}_{{\rm Silver}} = {\mathop{\bf Ag}}_{{\rm Silver}} = {\mathop{\bf Ag}}_{{\rm CI}}$	$\frac{79}{\text{Au}}$	$\stackrel{6d}{=} \frac{111}{\mathop{Residant B}} \stackrel{6d}{=} \\ \stackrel{\text{Roentgenium}}{\stackrel{(282)}{=}}$
	Nickel 8.6934(4)	$\overset{46}{\overset{2.20}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{\overset{1}{$	78 2.28 54* 79 Pt Platinum 195.084(9) 19	6d 110 6d DS 110 10 10 10 10 10 10 10 10 10 10 10 10
shell; atomic	3d   27   1.88   3d   28   COolult   Cobalt   58.933194(4)   5	A*       45       2.28       44*       46         Rhodium       Pr       Pr         102.90550(2)       11	54 77 2.20 54 78 Tradium 192.217(3)	$\begin{array}{ c c }\hline & 109 & \mathbf{6d} \\ \hline & \mathbf{Mt} \\ \mathbf{Meitnerium} \\ & (278) \\ \hline \end{array}$
tivity; ss = sub	3d <b>26</b> 1.83 3d		5d 76 2.2 5d OSmium 190.23(3)	6d 108 6d HS Hassium (269)
$Z={ m atomic}$ number; eneg = electronegativity; ss = subshell; Sy = Symbol, Name = element name, saw = standard atomic weight	$\sum_{\text{comium}} \frac{1.66}{\text{C}} 3d^* = \sum_{\text{L55}} 3d$ $\sum_{\text{marganese}} Manganese$ 9961(6) 54.938044(3)	$\mathbf{T}^{43}$ $\mathbf{C}^{44}$ Technetium (98)	$\mathbf{Re}^{\frac{75}{1.9}}$ 5d Rhenium 186.207(1)	6 <i>d</i> 107 6 <i>d</i> Bh Bh (270)
nic number; ene nbol, Name = 6		$ \underbrace{\mathbf{V}_{\mathbf{O}}}_{\mathbf{Molybdenum}} \mathbf{V}_{0}^{2.16} 4 d^* $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\sum_{\text{Seaborgium}\atop{(269)}}^{6d}$
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\mathop{\mathrm{Niobium}}_{92.90637(2)}^{41}$	$\overset{73}{\text{Ta}} \overset{1.5}{\overset{1.5}{\text{c}}} \overset{5d}{\overset{5d}{\text{c}}}$ Tantalum 180.94788(2)	$\mathop{Db}\limits_{\text{Dubnium}\atop (268)}$
Z eneg ss Name saw	1.54 <b>Ti</b> tanium (2.867(1)	40 1.33 4 <i>d</i> <b>Zr</b> Zirconium 91.224(2)	$ \underset{178.49(2)}{\overset{72}{\text{Halfinium}}} _{5d} $	$\Pr_{(261)}^{104}$
	21 1.36 3d 22 Scandium 44.955908(5) 47	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	57-71	89-103 <b>**</b> Actinides
18 28 4 1.57 28 Be Beryllium 7 9.0121831(5) 38 12 1.31 38 Mg Pesium Mg Pesium	48 20 1.00 48 21 Calcium Sc A0.078(4) 444.	5s 38 0.95 5s  Strontium 87.62(1)	6s 56 0.89 6s  Barium (6) 137.327(7)	$egin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c} \mathbf{H} \\ \mathbf{H} \\ \mathbf{H} \\ \mathbf{H} \\ \mathbf{H} \\ \mathbf{H} \\ \mathbf{G} \\ $	19 0.82 48 <b>K K</b> Potassium 39.0983(1)	$\mathop{Rubidium}\limits_{85.4678(3)}$	55 <u>0.79</u> 6s Csium 132.90545196(6)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

	<b>57</b> 1.1 5 $d^*$ 58 1.12 $4f^*$ 59 1.13 $4f$	<b>58</b> 1.12 4 <i>f*</i>	59 1.13 4 <i>f</i>	<sup>tf</sup> 60 1.14 4f 61 1.13 4f	<b>61</b> 1.13 4 <i>f</i>	<b>62</b> $1.17$ 4 <i>f</i>	1.2	<b>64</b> 1.2 4f*	11	<b>66</b> 1.22 4 <i>f</i>	<b>67</b> 1.23 4 <i>f</i>	<b>68</b> 1.24 4 <i>f</i>	<b>69</b> 1.25 4 <i>f</i>	70 <u>1.1</u> 4 <i>f</i>	71 $\frac{1.27}{1.27}$ 4f
*	La	Ce	7.	PZ	$\mathrm{Pm}$	- $        -$	30	D D	10		$H_0$	Er	m Tm	I AP	Lu
	Lanthanum	Cerium	Fraseodymium	Neodymium	Promethium	Samarium	opium	Gadolinium	erbium	Dysprosium	Holmium	Erbium	Thulium	Ytterbium	Lutetium
	138.90547(7)	140.116(1)	140.90766(2)	144.242(3)	(145)	150.36(2)	151.964(1)	157.25(3)	.92535	162.500(1)	164.93033(2)	167.259(3)	168.93422(2)	173.045(10)	174.9668(1)
	89 <u>1.1</u> 6 <i>d</i> *	90 1.3 5f*	89 1.1 6d* 90 1.3 5f* 91 1.5 5f* 92 1.38 5f* 93 1.36 5f*	92 1.38 5f*	93 1.36 5f*	94	95 1.13 5f	96 1.28 5f*	<u></u>	98 1.3 5f	99 1.3 5f	100 1.3 5f	101 1.3 5f	102 1.3 5f	103 1.3 5f
* *	$\mathbf{Ac}$	$\operatorname{Th}$	Pa	n	a N	Pu	$\overline{\mathrm{Am}}$	Cm	Bk	$\mathbf{C}\mathbf{f}$	$\mathbf{E}_{\mathbf{S}}$	Fm	$\mathbf{M}\mathbf{d}$	No	$\Gamma$ r
	Actinium	Thorium	Protactinium	Uranium	Neptunium	Plutonium	Americium	Curium	_	Californium	Einsteinium	Fermium	Mendelevium	Nobelium	Lawrencium
	(227)	232.0377(4)	231.03588(2)	238.02891(3)	(237)	(244)	(243)	(247)		(251)	(252)	(257)	(258)	(259)	(566)

Standard atomic weights taken from the Commission on Isotopic Abundances and Atomic Weights (ciaaw.org/atomic-weights.htm). Adapted from Ivan Griffin's LAFX Periodic Table. © 2017 Paul Danese

An asterisk (\*) next to a subshell indicates an anomalous (Aufbau rule-breaking) ground state electron configuration.