Periodic Table of the Elements

$ \begin{array}{c c} 1s \\ 2 \\ 2p \\ 3n \\ 3n$	<u>, </u>	4 <i>p</i>		5 <i>p</i>	3)	6 <i>p</i>	7 <i>p</i>
He Helium 4.002602(2) Neon Neon 20.1797(6)	$\mathop{\mathrm{Argon}}_{\substack{\mathrm{Argon} \ 39.948(1)}}$	$\frac{36}{1}$ $\frac{3.00}{1}$ 4p $\frac{3.00}{1}$ Krypton	83.798(2)	$\overset{54}{X}_{e}$	131.293(6)	$\Pr_{(222)}^{86}$	$\frac{7p}{2}$ 118 Oganesson (294)
2 4 4 4 4 4 4 4 4 4	C1 Chlorine 446-35.4	$\frac{35}{\mathbf{Br}}$ $\frac{2.96}{2}$ $4p$ 36	901–79.9		126.90447(3)	$\overset{85}{\mathbf{At}}_{(210)}$	e
3.44 2p Oxygen 115,9903- 116,9903- 117,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903- 118,9903-	Sulphur 32.059–32.0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	78.971(8)	$\overset{52}{\operatorname{Tell_{crite}}}\overset{5p}{\operatorname{fs}}$	127.60(3)	84 2.0 6p 85 Polonium	1 . 🖁
2p 7 3.04 2p 8 Nitrogen 14.00643- 14.00728 1.6 3.19 3.16	P Sphorus 3761998	$egin{array}{c cccc} 33 & \underline{2.18} & 4p & 34 \\ egin{array}{c} \mathbf{AS} & & & & \\ & & & & \\ & & & & \\ & & & & $.921595(6	$\overset{51}{\text{Sb}}\overset{2.05}{\overset{5p}{\text{C}}}$	Antumony 121.760(1)	6p 83 2.02 6p 84 Bismuth Figure 180,000,000,000,000,000,000,000,000,000,	7p 115 7p Moscovium (289)
$\bigcap_{12.0096-12.0116} \frac{2.55}{12.0116}$	$\mathbf{\hat{Si}}_{\mathbf{i}}^{\underline{1}}$ Silicon .084–28.086	$\begin{vmatrix} 32 & 2.01 & 4p & 33 \\ \mathbf{G}\mathbf{e} & & & & & & & & & & & & & & & & & & &$	72.630(8)	$\mathbf{S}_p _{5_p} \mathbf{S}_{1}$		$\overset{1.87}{Pb}$	
5 2.04 2p 6 Boron 10.806-10.821 14 13 1.61 3p 14	$\overline{A_{\rm I}}$	3d 31 1.81 4p 32 Gallium Ge	9.723(1)		114.818(1)	Thallium 204.382-	
		$\sum_{\rm Zinc}^{1.65}$	65.38(2)	$\mathbf{A}_{\mathbf{S}}^{\mathbf{S}}$	Cadmium 112.414(4)	$\mathbf{H}_{\mathrm{Mercury}}^{80}$	$6d$ 112 $6d$ $\mathbf{C}\mathbf{n}$ \mathbf{C} \mathbf{n} \mathbf{C} \mathbf{n} \mathbf{n} \mathbf{n} \mathbf{n} \mathbf{n} \mathbf{n} \mathbf{n} \mathbf{n} \mathbf{n}
		$\begin{bmatrix} 27 & \underline{1.88} & 3d & 28 & \underline{1.91} & 3d & 29 & \underline{1.90} & 3d^* & 30 \\ & & & & & & & & & & & & \\ \hline & & & & &$	83	74 0	511ver 107.8682(2)	$\mathbf{A}_{\mathrm{Gold}}^{79}$	$\mathop{\mathbf{Rgentgemin}}_{\text{(282)}}$
		$\sum_{\text{Nickel}}^{28} \frac{1.91}{3} \frac{3d}{}$		$\Pr_{\mathbf{P}_{\mathbf{q}}^{n},\mathbf{q}^{n}}^{d_{d}} = \Pr_{\mathbf{p}_{d}^{n},\mathbf{q}^{n}}^{d_{d}}$	106.42(1)	54 78 2.28 54* 79 Pt	L10 DS Darmstadtiu (281)
shell; atomic		$\overset{27}{\overset{1.88}{\mathbf{C0}}}\overset{3d}{\overset{3d}{\mathbf{O}}}$		$\mathbf{R}^{d*} \mathbf{P} \mathbf{R}^{d*} \mathbf{R}^{d*} \mathbf{R}^{d*} \mathbf{R}^{d*}$	102.90550(2)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	6d 109 6d 1 Mt Meitnerium 1 (278)
$\mathrm{tiv}(y; \mathrm{ss} = \mathrm{sub})$			55.845(2)	$\frac{44}{\mathbf{Ru}}$	101.07(2)	54 76 2.2 54 Osmium	
$Z = \text{atomic number; eneg} = \text{electronegativity; ss} = \text{subshell;} \\ \text{Sy} = \text{Symbol, Name} = \text{element name, saw} = \text{standard atomic} \\ \text{weight}$			54.938044(3)	$\prod_{\text{Topherical}}^{43} \mathbf{L}_{\mathbf{C}}^{4d}$	(86)	$\stackrel{2.36}{\mathrm{W}}$ 5d 75 $\stackrel{1.9}{\mathrm{1.9}}$ 5d $\stackrel{5d}{\mathrm{W}}$ Re ungsten Rhenium 186 904(1)	6d 107 6d Bh Bohrium (270)
nic number; ene nbol, Name = e		$\overset{24}{\overset{1.66}{\text{Cr}}} \overset{3d^*}{\text{Chromium}}$	51.9961(6)	$\stackrel{ ext{42}}{ ext{Mo}} \stackrel{ ext{2.16}}{ ext{4d}^*} \stackrel{ ext{4d}^*}{ ext{Mo}}$	Molybdenum 95.95(1)	5d 74 2.36 5d W	6d 106 6d Seaborgium (269)
Z = a ton Sy = Syn weight		$\sum_{\text{Vanadium}}^{23} \frac{1.63}{3} 3d$	50.9415(1)	$\overset{41}{\overset{1.6}{\operatorname{N}}}\overset{4d^*}{\overset{\text{Night.}}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{\text{Night.}}{\overset{N}}}{\overset{N}}{\overset{N}}}{\overset{N}}{\overset{N}}{\overset{N}}}{\overset{N}}{\overset{N}}}}}}}}$	92.90637(2)	5d 73 1.5 5d Tantalum Tantalum	6d 105 6d Db Dubnium (268)
Z eneg SS SV Name saw		$\mathbf{S_{C}}_{\mathrm{andium}}$ 3d 22 1.54 3d $\mathbf{F_{i}}_{\mathrm{Trianium}}$	47.867(1)	$\sum_{\text{Times}}^{40} \frac{1.33}{\text{L}}$	91.224(2)	$ \underbrace{ \mathbf{H}}_{\text{Halfnium}}^{\textbf{72}} \underbrace{ \frac{1.3}{1.8}}_{\text{5d}} \underbrace{ 5d}_{\text{9d}} $	$\Pr_{104} \begin{cases} 6d \\ \mathbf{Rf} \end{cases}$
		$\mathbf{\overset{21}{S}}_{\mathrm{Candium}}^{1.36}$	44.955908(5)	$\sum_{S \mid S \mid$	88.90584(2)	57-71 * Lanthanides	89-103 ** Actinides
18 2s 4 1.57 2s Be Beryllium 9.0121831(5) 3s 12 1.31 3s	${ m Mg}_{ m Magnesium}$	$\overset{0.82}{\mathbf{K}}$ 4s $\overset{20}{\mathbf{Ca}}$ 1.00 4s 21 $\overset{20}{\mathbf{K}}$ 4s 21 tassium Calcium Sce	40.078(4)	$\sum_{\mathbf{S}=\mathbf{S}} \frac{\mathbf{S}}{\mathbf{S}} = \frac{0.95}{5}$	87.62(1)	68 56 0.89 68 Barium Barium 137 297(7)	88
1 220 1s Hydrogen 1,00784- 1,0081 3 0.98 2s 4 Lithium 6,938-6,997 9,11 0.93 3s 12	~ ∞ ∞	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	\Box	$\Pr_{\text{Privide}}^{37} \stackrel{0.82}{=} ^{5s}$	85.4678(3)	$\bigcap_{\text{Cesium}} 55 \underbrace{0.79}_{\text{Cesium}} 6s$	87 <u>0.7</u> 78 Francium (223)

*	$\stackrel{57}{La} \stackrel{1.1}{a} \stackrel{5d^*}{s} \stackrel{58}{o} \stackrel{1.12}{-12} \stackrel{4f^*}{s} \stackrel{59}{o}$ Lanthanum Cerium 128 $006A7777$ 140 116(1)	Cerium Continue Conti	$\sum_{\mathrm{odymium}}^{1.13} 4$	60 1.14 4f 61 1.13 4f 1.13 Nodymium Promethium Promethium Nodymium Promethium Nodymium Nodymium	$\Pr_{(145)}^{61}$	Sm Samarium 150 36(2)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\prod_{\substack{\text{Terbium}\\15.8\text{ obs }35(2)}}^{65}$	$ \begin{array}{c cccc} 66 & \underline{1.22} & 4f & 67 \\ \mathbf{Dy} & \mathbf{y} \\ \mathbf{Dysprosium} \\ \mathbf{162500(1)} & 162 \\ 161 & \mathbf{162500(1)} \\ 161 & 161$	$\widetilde{\mathrm{Ho}}_{\mathrm{minm}}^{1.23}$	44 68 1.24 44 Erbium	44 69 1.25 4f	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
89 <u>1</u> Actii	$\mathbf{\overset{1.1}{A}\overset{6d}{c}}_{\mathbf{c}}^{\mathbf{m}}$	$\frac{1.3}{\Gamma}$ 5 f^* 9	$\mathbf{Pa}^{1.5}$ 91 $\frac{1.5}{2}$ 5 f^* Protectinium	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\frac{\mathbf{p3}}{\mathbf{N}} \frac{1.36}{\mathbf{p}} 5f^*$	\mathbf{Pu}^{4}	${\overset{95}{\mathrm{Am}}}_{\overset{1.13}{\mathrm{m}}}$ 5 f	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\frac{97}{2}$ $\frac{1.3}{2}$ $5f$ Berkelium	$\overset{98}{\overset{1.3}{\text{C}}}$ 5 f	$\frac{1.3}{E_S}$ 5 f	. 5 <i>f</i>	$\overset{101}{\mathrm{M}}\overset{1.3}{\mathrm{d}}$ 5 f	$\sum_{\text{Nobelium}}^{102} 5f$	$\frac{103}{Lr}$ 55
, ,	(227) 25	32.0377(4)	231.03588(2)	238.02891(3)	(237)	(244)	(243)	(247)	(247)	(251)	(252)	(257)	(258)	(229)	(366)

Standard atomic weights taken from the Commission on Isotopic Abundances and Atomic Weights (ciaaw.org/atomic-weights.htm). Adapted from Ivan Griffin's LYBX Periodic Table. © 2016 Paul Danese