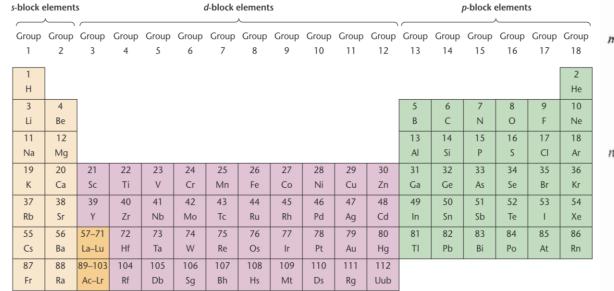
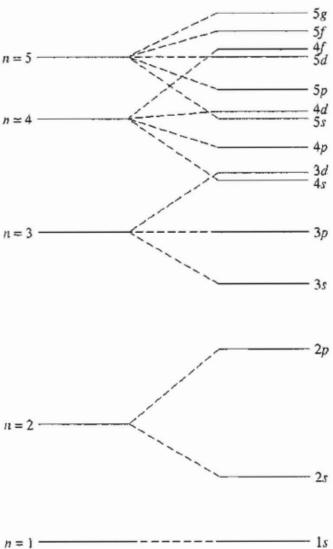


Distance r from the nucleus/atomic units





	Lanthanoids	58	59	60	61	62	63	64	65	66	67	68	69	70	71
		Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Но	Er	Tm	Yb	Lu
4	Actinoids	90	91	92	93	94	95	96	97	98	99	100	101	102	103
		Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr



## One-electron atom

E<sub>n</sub>

E<sub>4</sub>

$$4s$$
 $4p_x$ 
 $4p_z$ 
 $4p_y$ 
 $4d_{xy}$ 
 $4d_{xy}$ 
 $4d_{yz}$ 
 $4d_{zz}$ 
 $4d_{xy}$ 
 $4d_{xy$ 

## **Multi-electron atom**

