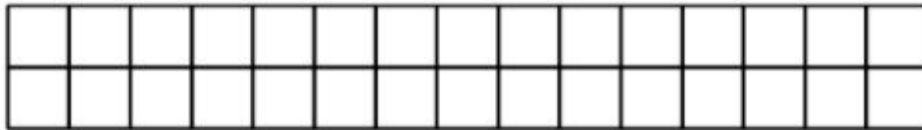
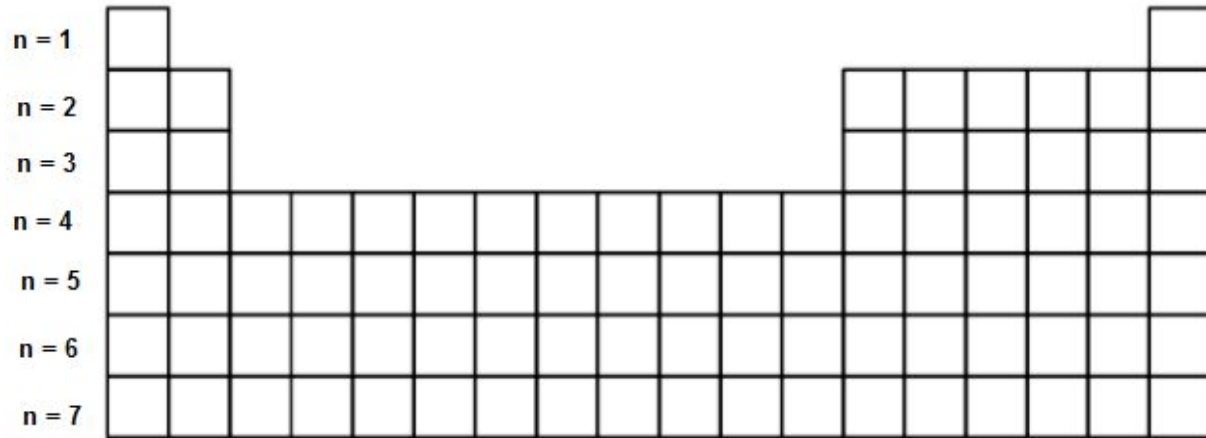


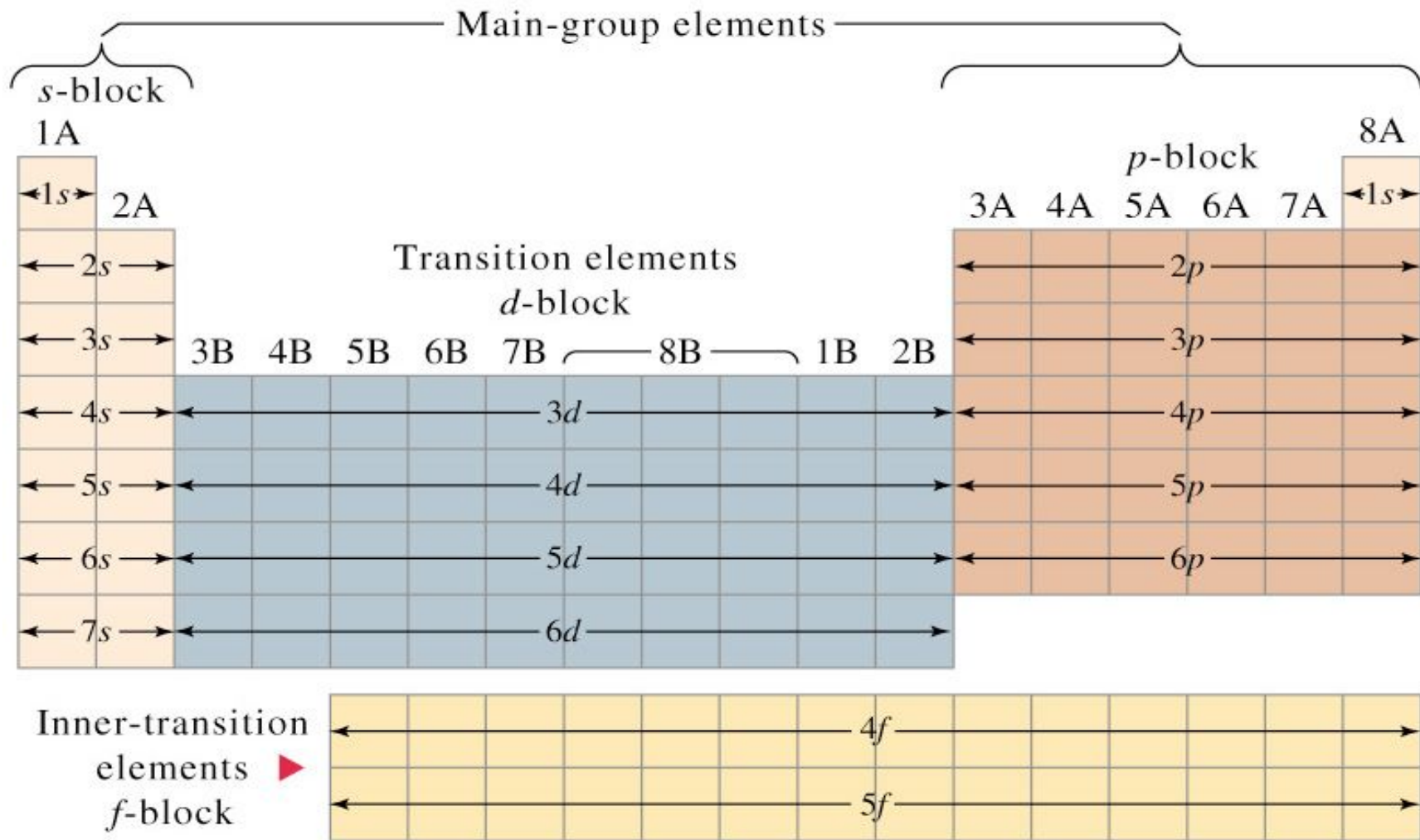


Quantum Number	Letter	Meaning	Values	Other Info
Principal Quantum Number	n	<ul style="list-style-type: none">● Main energy level● Distance of e^- is to the nucleus	n=1,2,3,4.. .	<ul style="list-style-type: none">● Orbitals with the same value of n = electron shell● n also indicates the # of sublevels

Principal Quantum Number, n

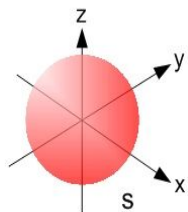


Quantum Number	Letter	Meaning	Values	Other Info
Orbital quantum number	l	Shape of orbital	0 to $n-1$	<ul style="list-style-type: none">● $l = 0$: s-block; sphere● $l = 1$: p-block; dumbbell● $l = 2$: d-block; butterfly● $l = 3$: f-block



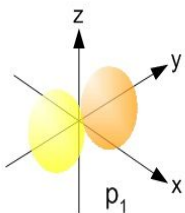
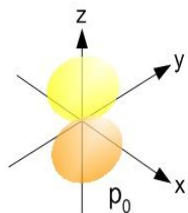
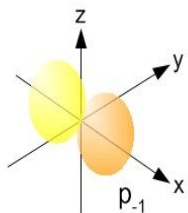
l

0



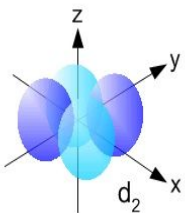
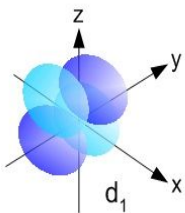
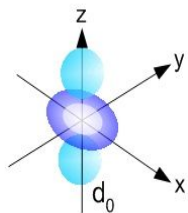
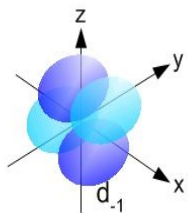
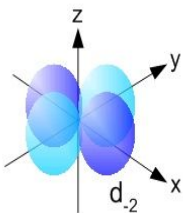
s-block

1



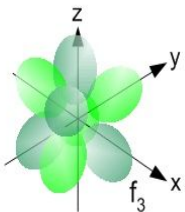
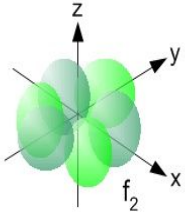
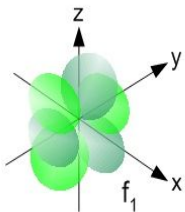
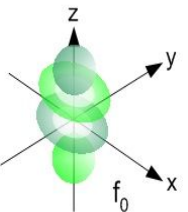
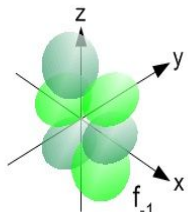
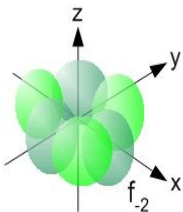
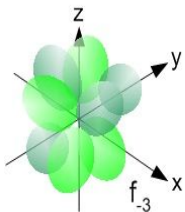
p-block

2



d-block

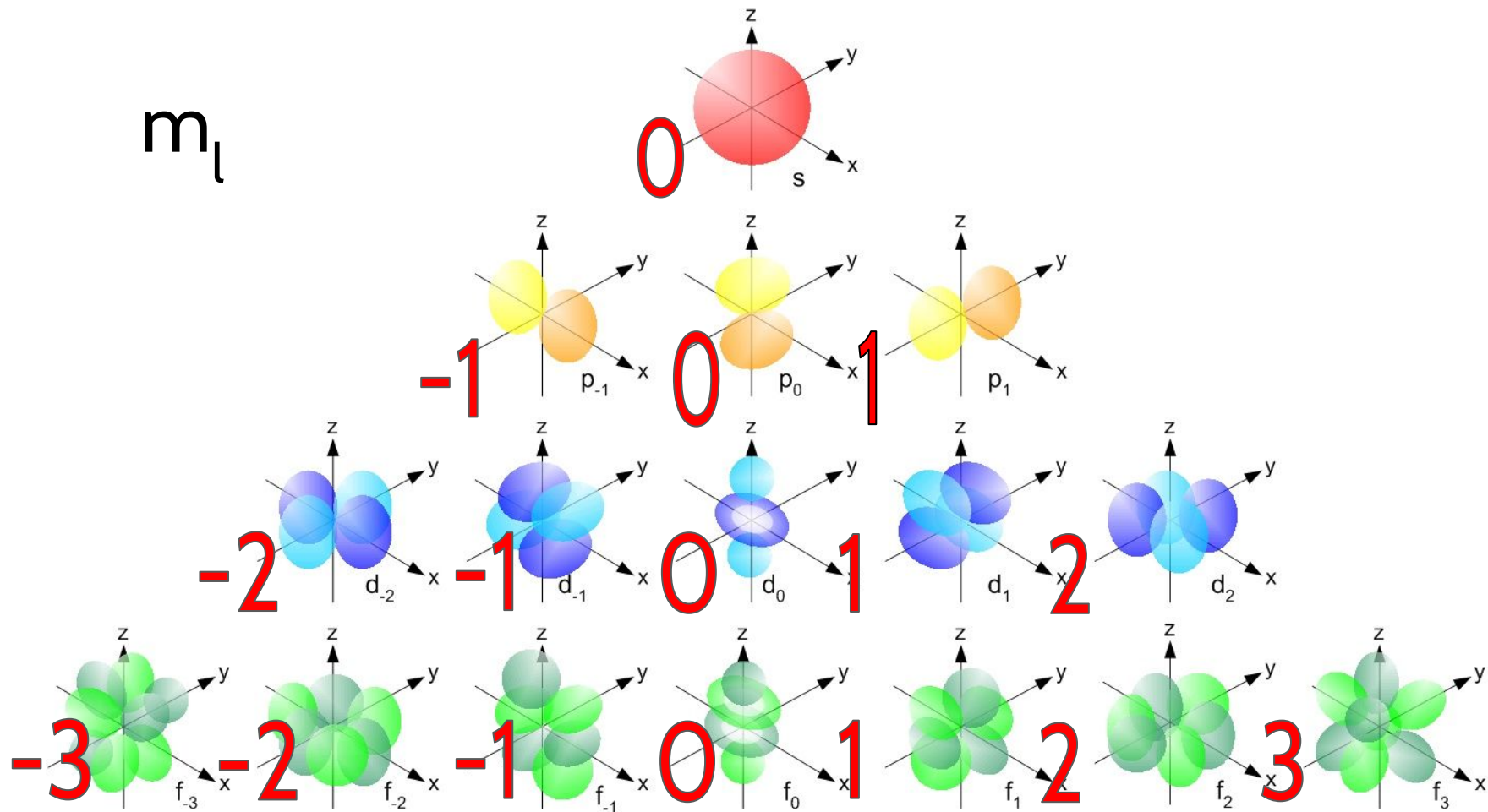
3



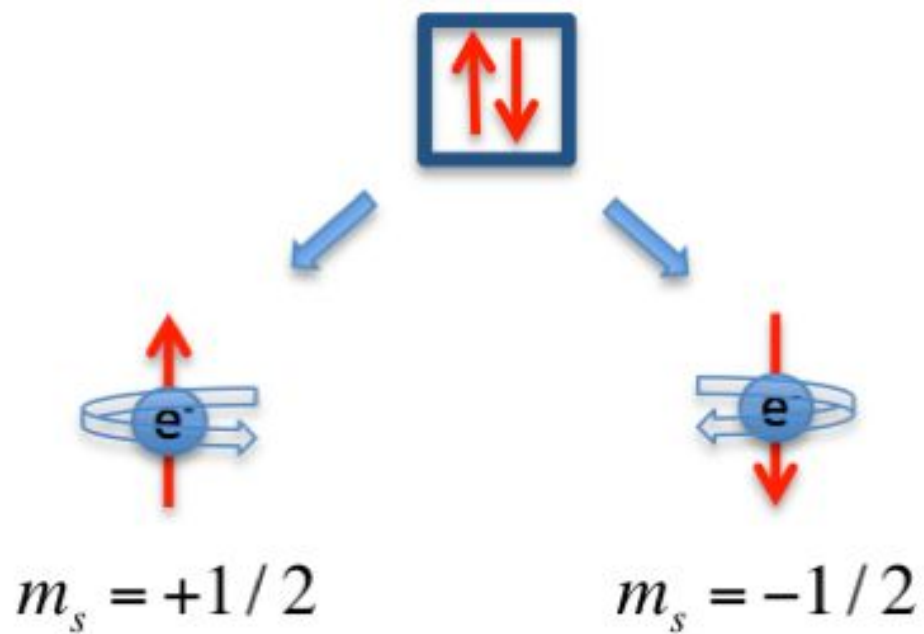
f-block


Quantum Number	Letter	Meaning	Values	Other Info
Magnetic Quantum Number	m_l	Orientation of orbital in space	-l to l, including 0	Indicates # of orbitals

m_l



Quantum Number	Letter	Meaning	Values	Other Info
Spin Quantum Number	m_s	Spin of e^- in orbital	$+1/2$, $-1/2$	Pauli Exclusion Principle: no two e^- can have the same 4 quantum numbers



 :electron

