

# Interactions of Nature

**weak force**

**strong force**

**electromagnetism**

**gravity**

# MATTER

Periodic Table  
of the Elements

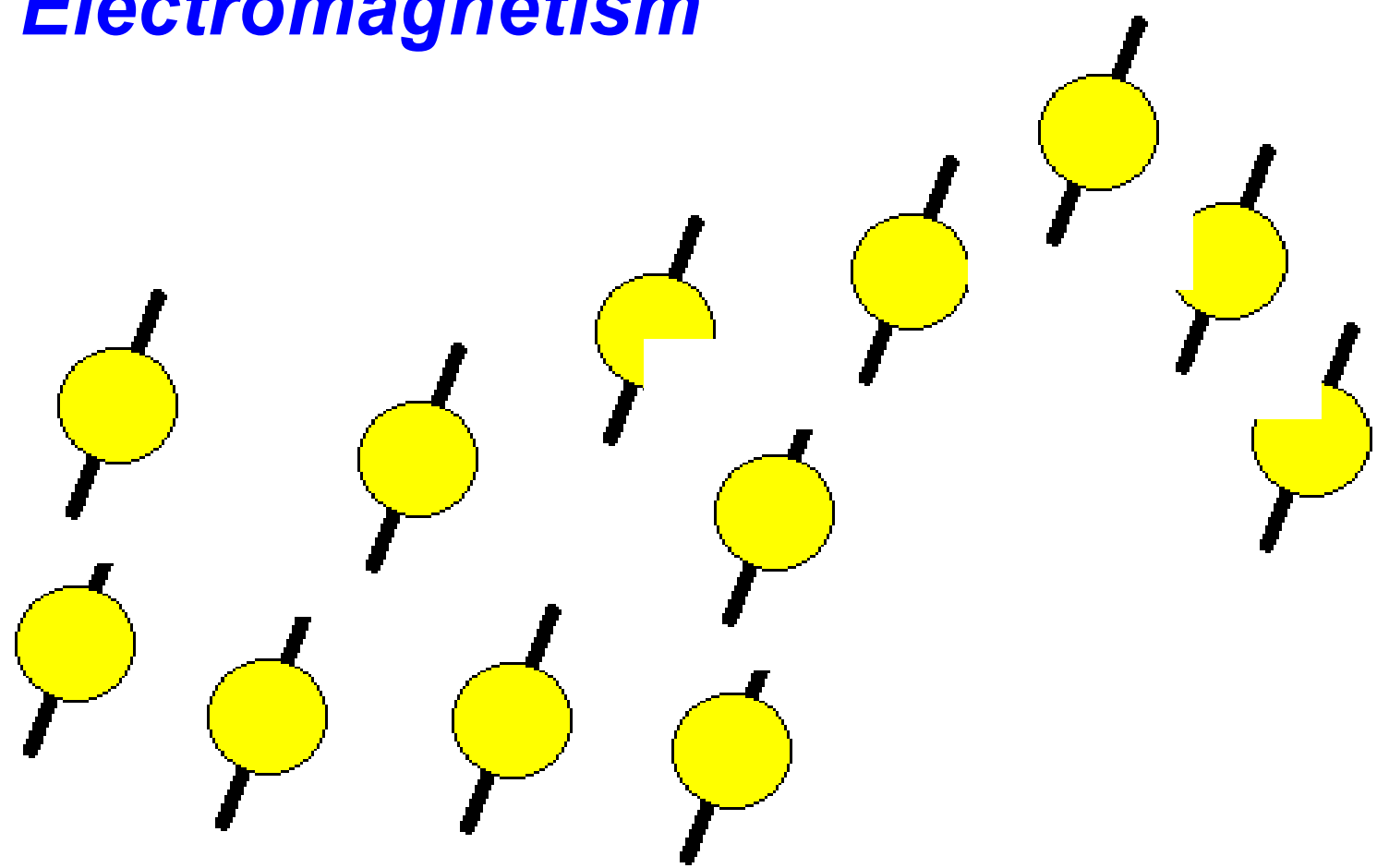
1	IA	1	H	2	0	2	He																															
2	IIA	3	Li	4	Be	5	B	6	C	7	N	8	O	9	F	10	Ne																					
3	III A	11	Na	12	Mg	13	Al	14	Si	15	P	16	S	17	Cl	18	Ar																					
4	IIIB	19	K	20	Ca	21	Sc	22	Ti	23	V	24	Cr	25	Mn	26	Fe	27	Co	28	Ni	29	Cu	30	Zn	31	Ga	32	Ge	33	As	34	Se	35	Br	36	Kr	
5	IVB	37	Rb	38	Sr	39	Y	40	Zr	41	Nb	42	Mo	43	Tc	44	Ru	45	Rh	46	Pd	47	Ag	48	Cd	49	In	50	Sn	51	Sb	52	Te	53	I	54	Xe	
6	VB	55	Cs	56	Ba	57	*La	72	Hf	73	Ta	74	W	75	Re	76	Os	77	Ir	78	Pt	79	Au	80	Hg	81	Tl	82	Pb	83	Bi	84	Po	85	At	86	Rn	
7	VIB	87	Fr	88	Ra	89	+Ac	104	Rf	105	Ha	106	107	108	109	110	111	112																				

Naming conventions of new elements

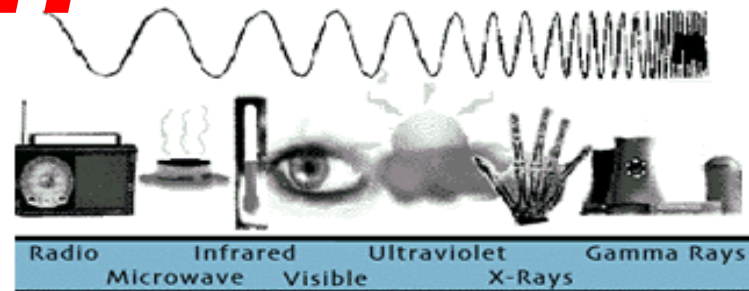
* Lanthanide Series	58	59	60	61	62	63	64	65	66	67	68	69	70	71
	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
+ Actinide Series	90	91	92	93	94	95	96	97	98	99	100	101	102	103
	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

## Weak and Strong

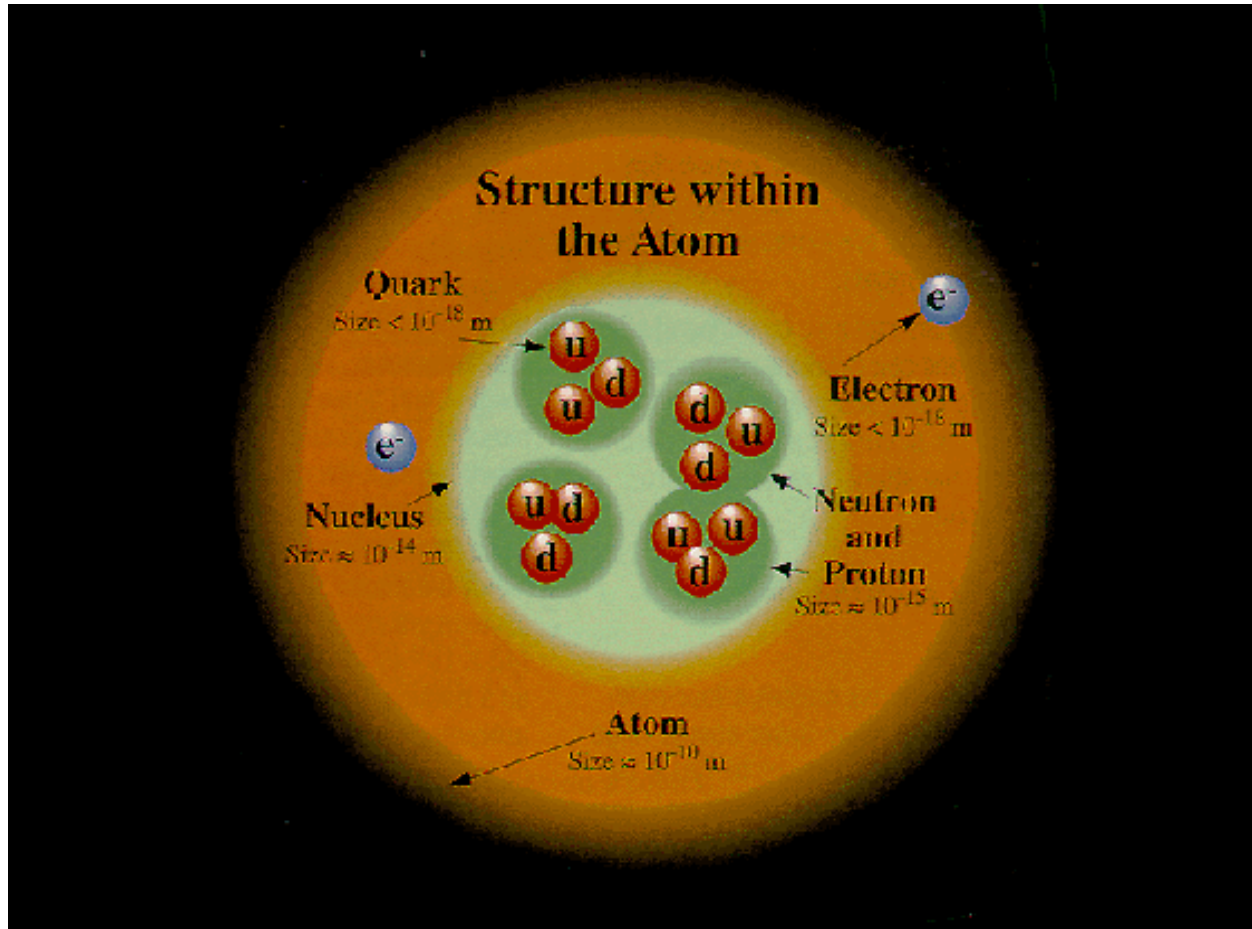
# *Electromagnetism*



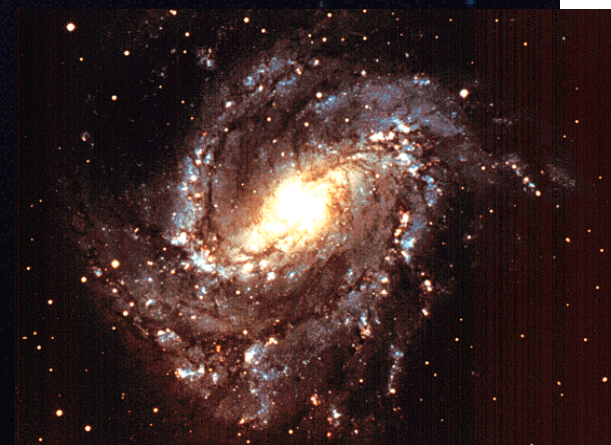
# *Electromagnetic wave spectrum*



The electromagnetic spectrum stretches from radio waves to gamma rays.



# Gravity and Motion





# Newton's

## First Law

An object that is in motion continues in a straight line, at constant speed, unless a force acts upon it.

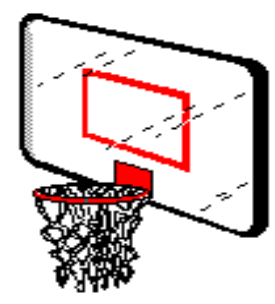
## Second Law

If an unbalanced force acts upon an object, the object will be accelerated ( $F = ma$ ).

## Third Law

For every action there is a opposite and equal reaction .

# Basketball







# Micro- gravity

# Anti-gravity machines

