

Les différents atomes

Tableau périodique des éléments chimiques																		VII A 18											
Groupe → I A																		II A		III B		IV B		V B		VI B		VII B	
Période ↓ 1																		13		14		15		16		17			
1																		Bore 5 B		Carbone 6 C		Azote 7 N		Oxygène 8 O		Fluor 9 F		Hélium 2 He	
2																		10,811		12,011		14,0065		15,9994		18,9984032		20,1797	
3																		Aluminium 13 Al		Silicium 14 Si		Phosphore 15 P		Soufre 16 S		Chlore 17 Cl		Argon 18 Ar	
4																		26,9815385		28,0855		30,97376199		32,065		35,453		39,948(1)	
5																		39,0983		39,0983		39,0983		39,0983		39,0983		39,0983	
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Figure 10 – Tableau de Mendeleïev de 2016 avec 118 éléments[?]

De quoi sont constitués les Nucléons ?

Nucléon

- ▶ Particule composée de 3 plus petites particules appelées **quarks**.

Proton

- ▶ 2 quarks **u**
- ▶ 1 quark **d**

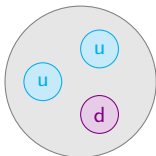


Figure 11 – Proton

Neutron

- ▶ 1 quark **u**
- ▶ 2 quarks **d**

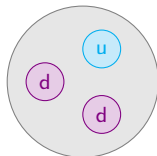


Figure 12 – Neutron

Interaction Forte

Historique :

- 1964 Découverte par Murray Gell-Mann
- 1969 Prix Nobel, *pour la classification des particules élémentaires et leurs interactions*

Forte

- Force nucléaire forte
- Charge de couleur

Propriétés

- Confiné
- Porte une charge de couleur

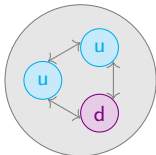


Figure 13 – Proton

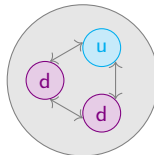


Figure 14 – Neutron

Bilan de la composition de la Matière

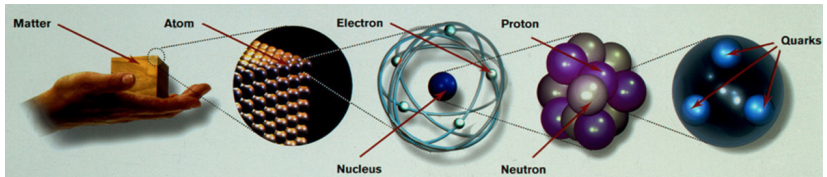


Figure 15 – Décomposition de la Matière

Ordre de grandeur des composants de la matière

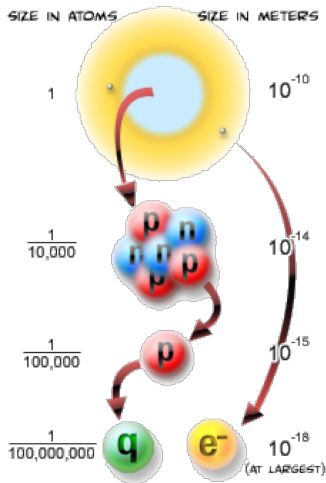


Figure 16 – Décomposition d'un atome avec l'échelle des diamètres