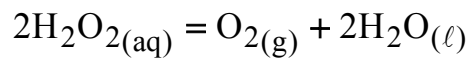


2011 - 2010 :			
06 :	:	:	3 :
			/ :

2011 -02 - 15: :

(04) :

:



.(Fe³⁺) III

: t = 0

. C = 2,5 mol.L⁻¹

V = 24 mL -

. (Fe³⁺_(aq) + 3Cl⁻_(aq)) III

6 mL -

. V_T = 1,0 L -

V_{O₂}

. P = 1,013.10⁵ Pa

:

t (min)	0	5	10	15	20	25	30	35	40	60
V _{O₂} (mL)	0	160	270	360	440	500	540	590	610	680

- I

:

- 1

		2 H ₂ O _{2(aq)} = O _{2(g)} + 2 H ₂ O _(l)		
		mol		

X_{max}

- 2

V_M V_{O_2} t $x(t)$ - 3

$V_M = 24 \text{ L}\cdot\text{mol}^{-1}$:

$x(t)$ - II

:

t (min)	0	5	10	15	20	25	30	35	40	60
x(t) (mmol)										

$x(t)$ - 2

- 3

- 4

$t = 20 \text{ min}$ - 5

- 6

- 7

$V_T = 0,50 \text{ L}$ - 8

:

-

-

(04) :

5000 ans

XVI

100 millions d'années

XIX

Becquerel

-

206

$^{238}_{92}\text{U}$

(γ)

Thorium Th

α

$^{238}_{92}\text{U}$

-I

- 1

- 2

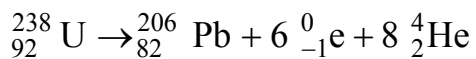
$^{234}_{91}\text{Pa}$ (Protactinium)

- II

- 1

- 2

- III



β α

- IV

206

238

206

$t = 0$

206

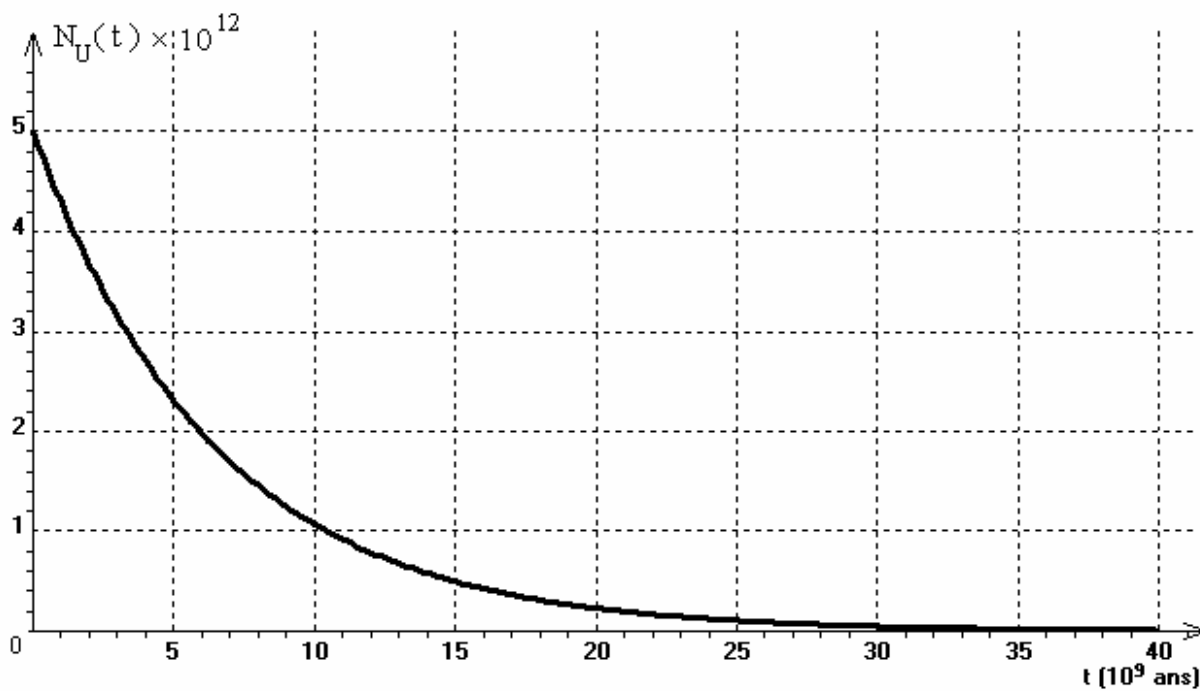
238

t_{Terre}

238

$N_U(t)$

- 1



$N_U(0)$

/ :

λ

τ

/

$N_U(t)$

- 2

$t = 1,5 \cdot 10^9$ années

- 3

. 238

$t_{1/2}$

- 4

. t_{Terre}

- 5

. $N_{Pb}(t_{Terre}) = 2,5 \cdot 10^{12}$ atomes

$N_U(t_{Terre})$

. $N_{Pb}(t_{Terre})$

$N_U(0)$

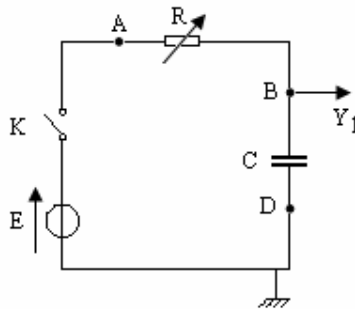
$N_U(t_{Terre})$:

/

. t_{Terre}

/

(04) :



. K

C

$E = 6 \text{ V}$

. $t = 0$

- 1

. u_{BD} u_{AB} :

- 2

Y_1

u_{BD}

- 3

. $u_{BD}(t)$

()

- 4

. τ

. $u_{BD} = E (1 - \exp (- t / \tau))$:

- 5

R

τ

- 6

:

- 7

K

$R = 100 \Omega$

-

. τ

u_{BD}

. u_{BD}

:

/

R (Ω)	100	200	300	400	500
τ (ms)	10				

. $\tau = f(R)$

/

C

/ \rightarrow

. $R = 200 \Omega$

$t = \tau$

/

(04) :

héliocentrique

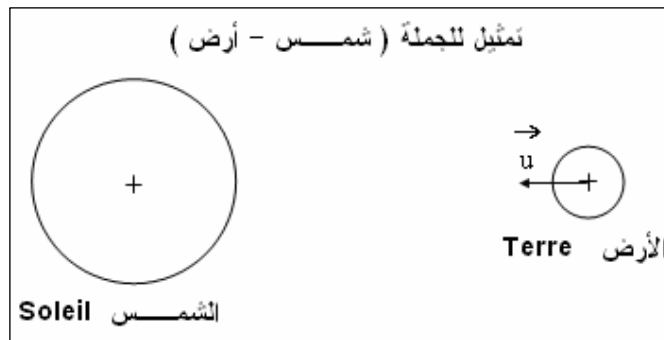
$$r = 1,50 \cdot 10^{11} \text{ m}$$

$$\vec{a}$$

$$M_S = 1,98 \cdot 10^{30} \text{ Kg}$$

$$G = 6,67 \cdot 10^{-11} \text{ S.I.}$$

$$\vec{u}$$



" "

$$\vec{a}$$

r

v

a

r

M_S

G

v

v

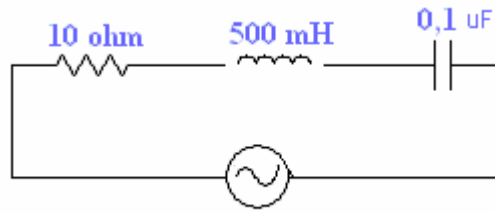
T

T (Jours)

$$T = \frac{2 \cdot \pi \cdot r^{\frac{3}{2}}}{\sqrt{G \cdot M_S}}$$

(04) :

:



. LC

RLC

- 1

. $f = 714,3 \text{ Hz}$

. f_0

RLC

- 2

$I_0 = 73 \text{ mA}$

/

/

/ \rightarrow

U_0

. Δf_0

$(U_C)_0 = 15 \text{ V}$

/

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