

# Atom tuzilishi

Maqsad: Atommodellari bilan  
tanishish

1896 yilda, fransuz fizigi Anri Bekkeril radioaktivlikni ochdi:  
ba'zi bir element atomlarining o'z-o'zidan energiya  
nurlantirish qobiliyati.

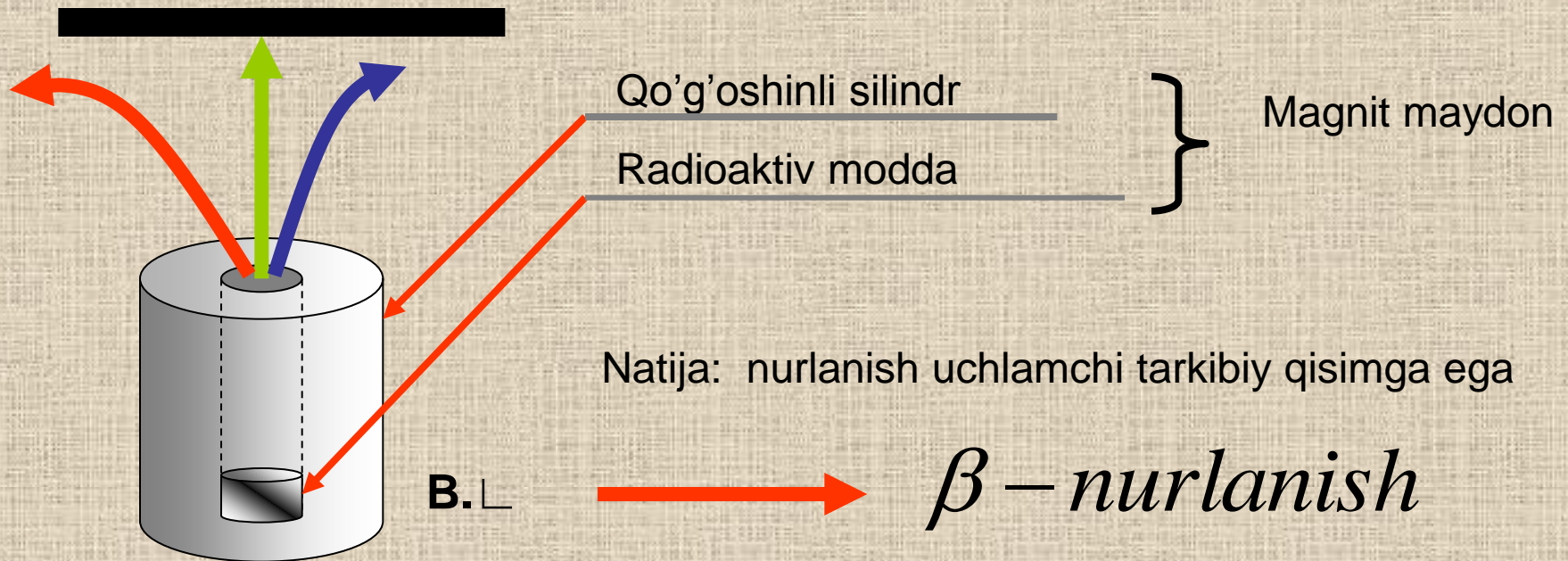
Misol: Elementlar davriy jadvalida poloniydan boshlab  
hamma elementlar ?

**Nurlanish tarkibi?**

## Tajriba

Maqsad: **padioaktiv nurlanish tarkibini aniqlash**

Lyumenesent to'siq(ekran)



Natija: nurlanish uchlamchi tarkibiy qisimga ega

B.L



$\beta$  - nurlanish

M.L



$\alpha$  - nurlanish

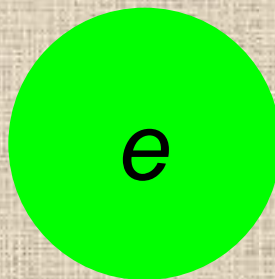


$\gamma$  - nurlanish

Xulosa: **atom murakkab tuzilishga ega**

$\beta$  – nurlanish

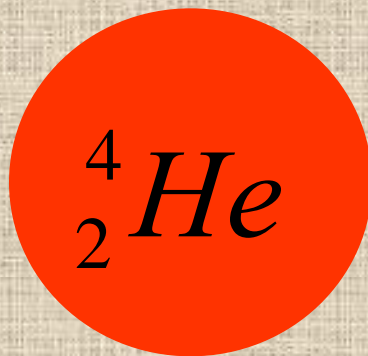
**B.** L



**Harakatchan elektronlar**  
(eng kichik manfiy zaryad)

$\alpha$  – nurlanish

**M.** L



**Geliy atomi yadrosi**  
(musbat zaryadlangan  
zarracha)

$\gamma$  – nurlanish

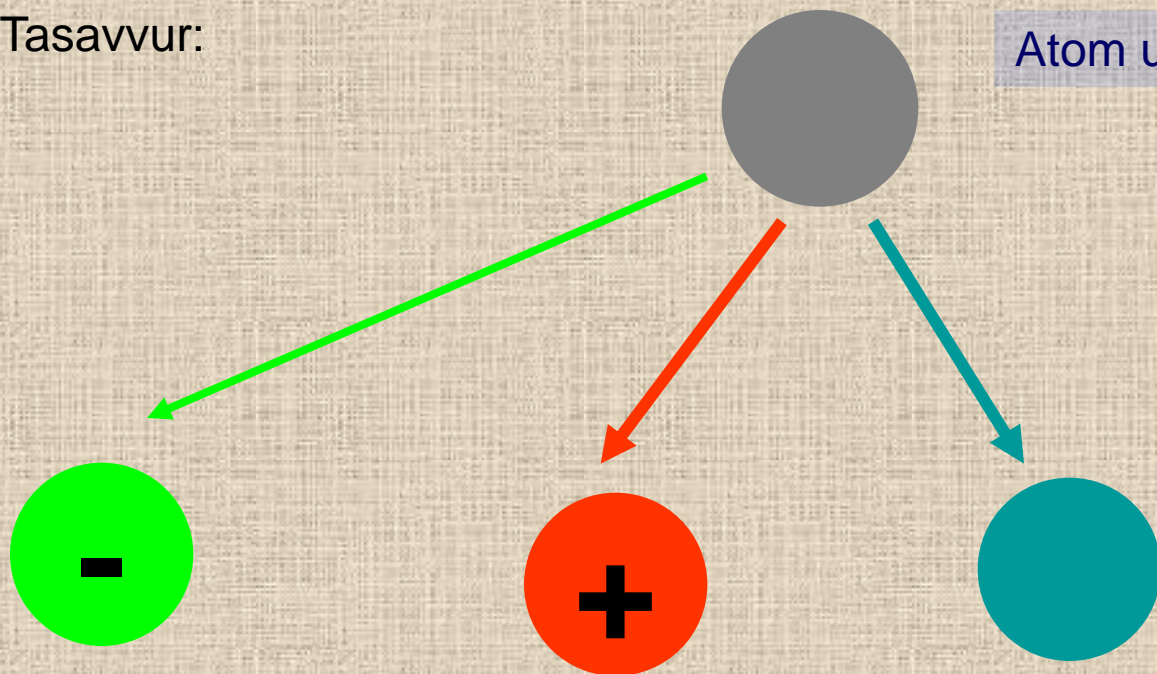
**Elektromagnit  
nurlanish**

(zaryadi yo'q)

# Atom nimadan tashkil topgan?

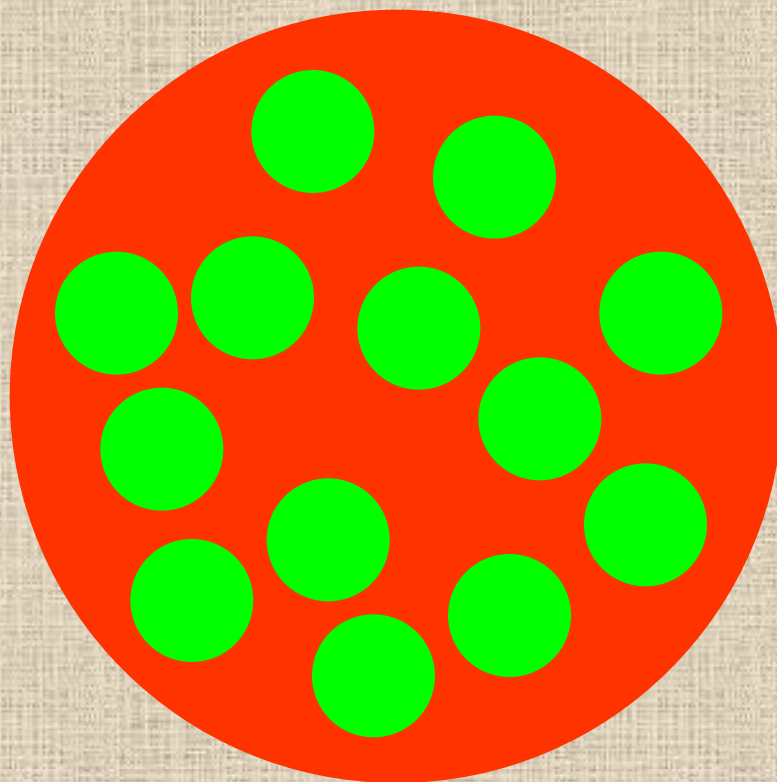
Tasavvur:

Atom umuman neytral zarracha



J. J. Tomson (ingliz olimi)

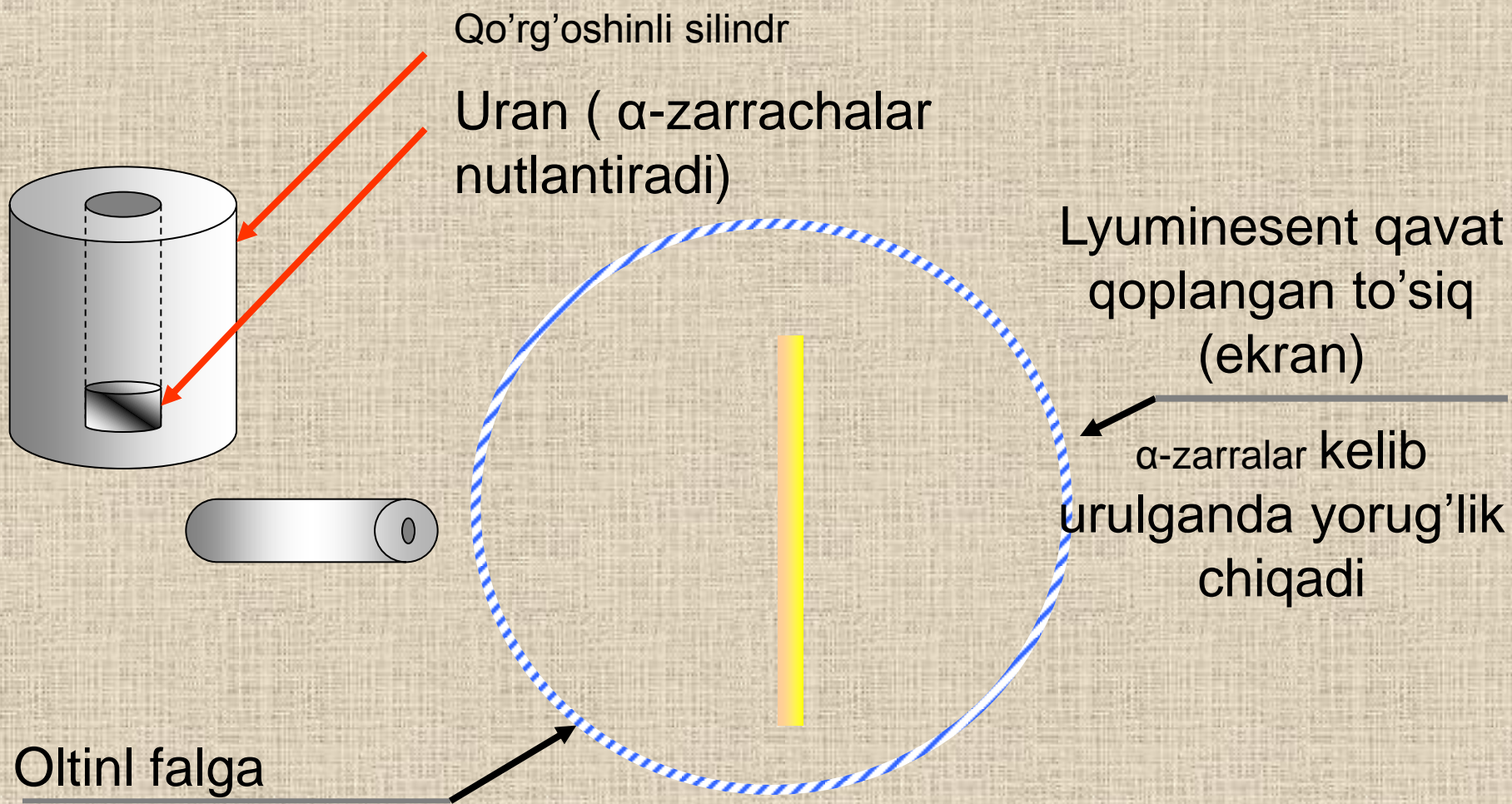
*Atom – shar bo'lib, ichida elektronlar mavjud, unung umumiy hajmi bo'yicha musbat zaryad tarqalgan*

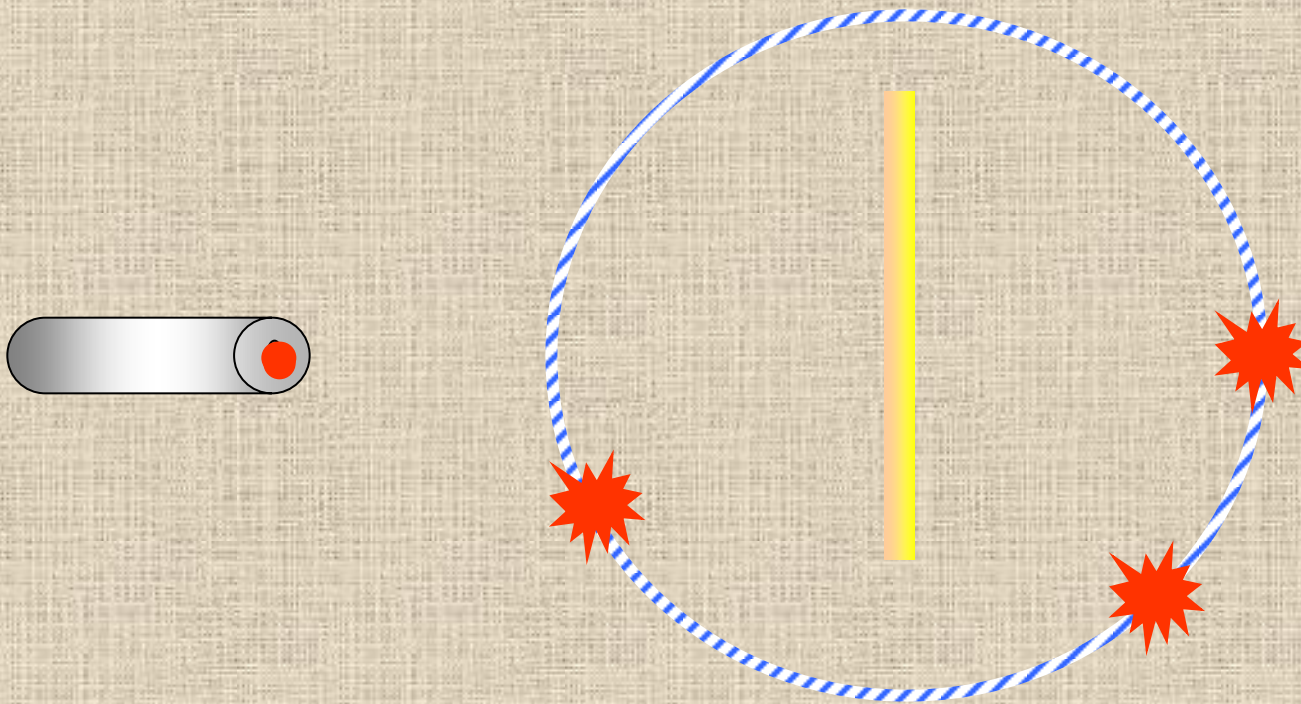


# 1911 yil, Ernest Rezerford (ingliz fizigi)

## Tajriba

Maqsad: **atomning tarkibini aniqlash**



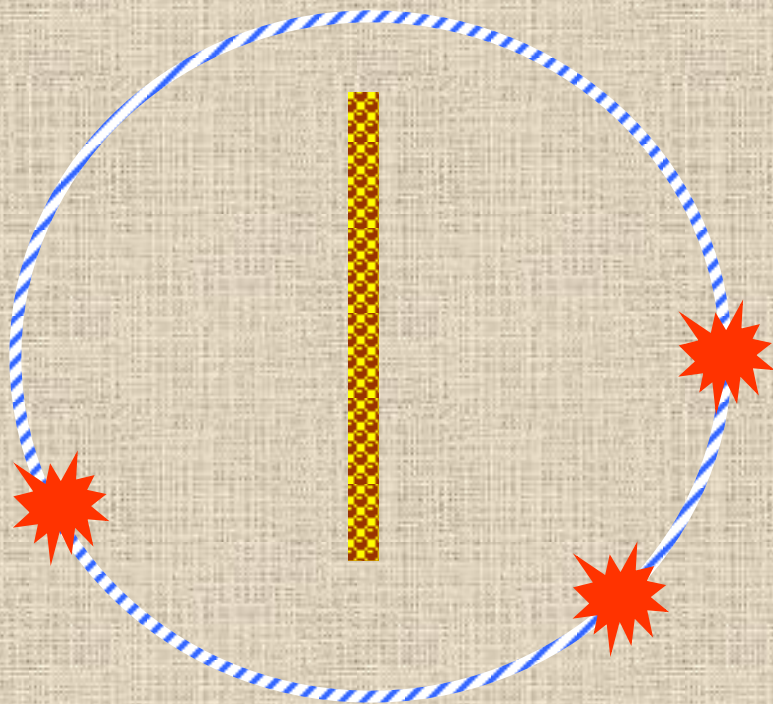
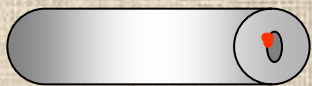


Natija:

1. *Ko'pchilik*  $\alpha$ -zarrachalar qayrilmasdan galgadan o'tib ketadi.
2. ba'zi  $\alpha$ -zarrachalar kichik burchakga egiladi.
3. Kattaroq burchakga egiladigan  $\alpha$ -zarrachalar bor

$90^{\circ}$

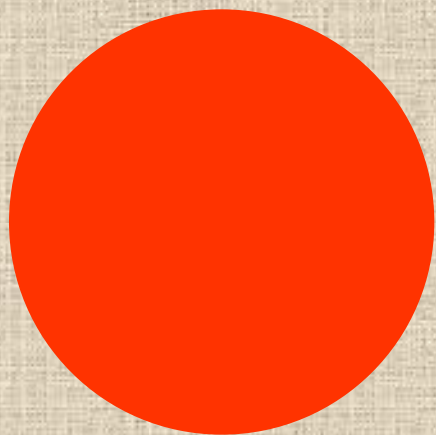




Natija:

1. *Ko'pchilik*  $\alpha$ -zarrachalar egilmasdan falgadan o'tib ketadi.
2. Ba'zi  $\alpha$ -zarrachalar kichik burchakga egiladi.
3. Kattaroq burchakga egilgan  $\alpha$ -zarrachalar bor

$90^{\circ}$



Musbat, og'ir  
 $\alpha$ -zarracha

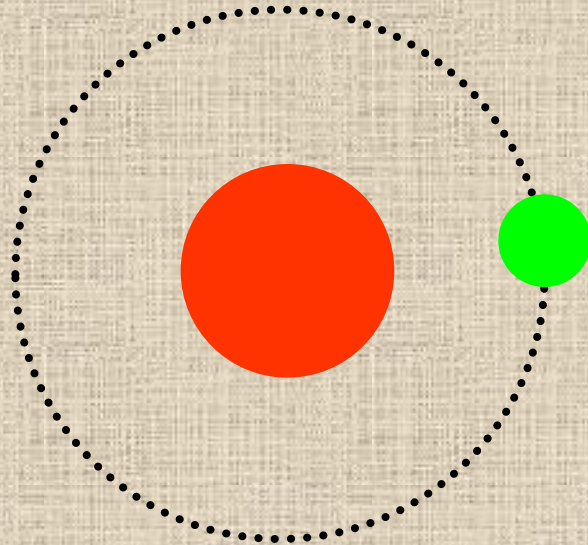
Nima bilan to'qnashdi, kattaroq  
burchakka egilish uchun

$90^0$



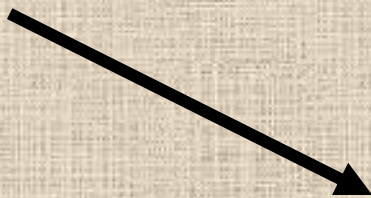
# Xulosa:

- Atomning hamma massasi markazda jamlangan – **musbat yadroda**
- Yadro atrofida **manfiy zaryadlangan elektronlar** harakatda bo'ladi



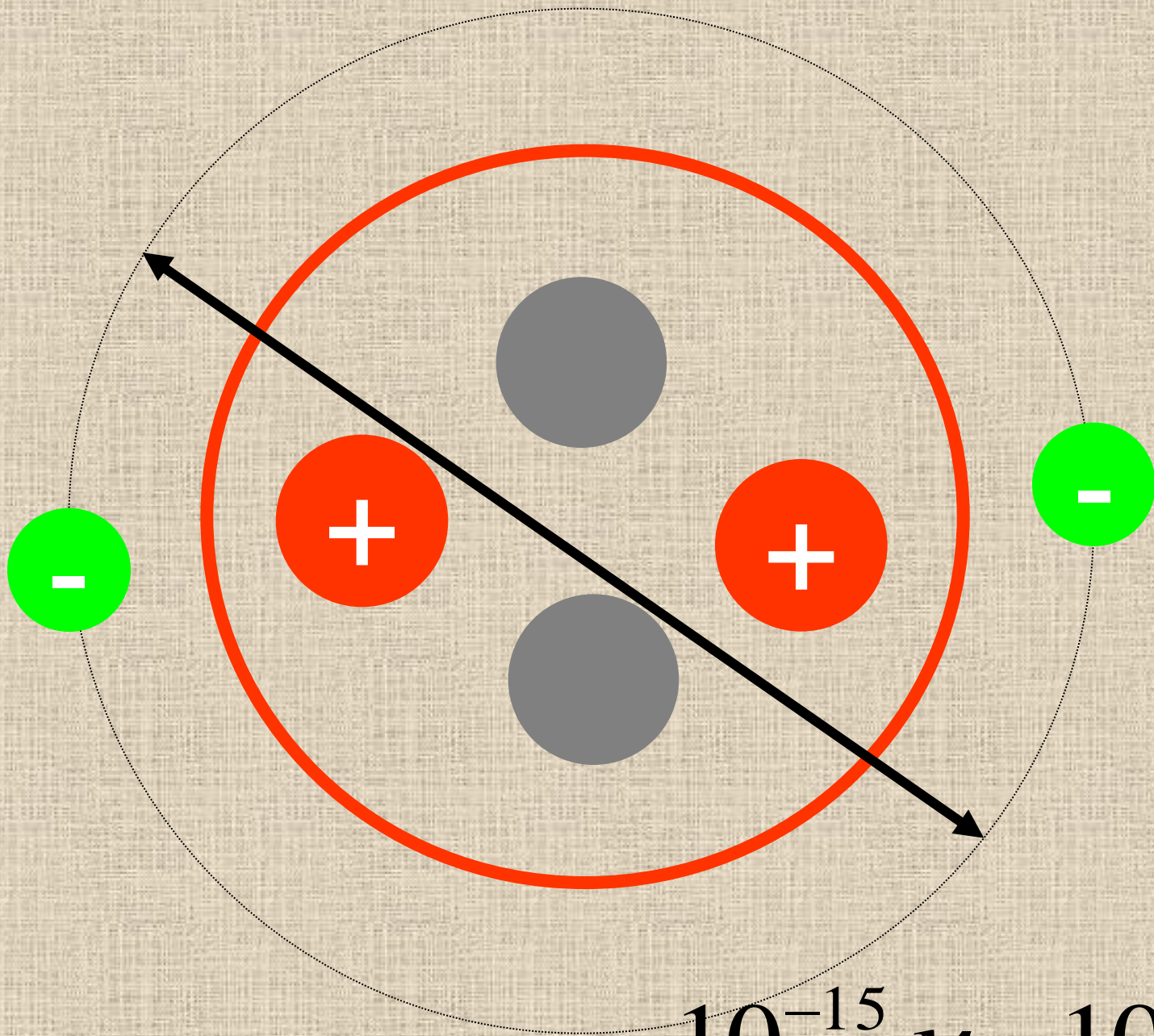


protonlar



neytronlar



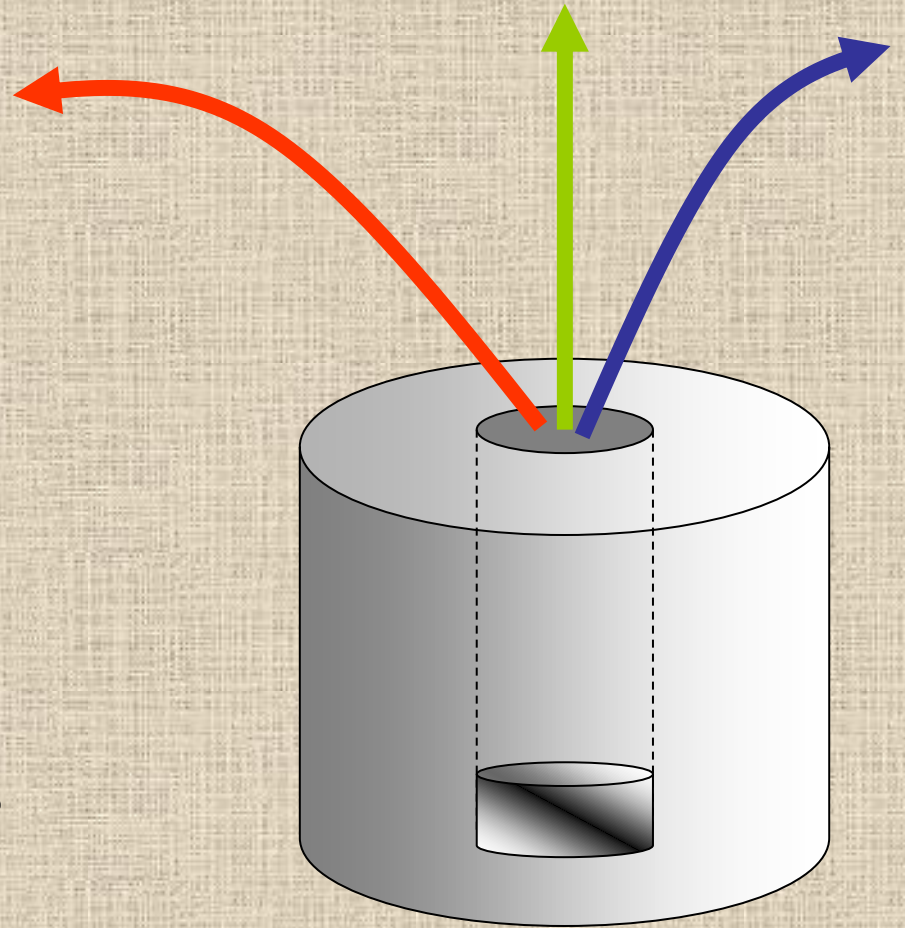


Yadro diametri -

$$10^{-15} \mathcal{M} - 10^{-16} \mathcal{M}$$

# Mustahkamlash

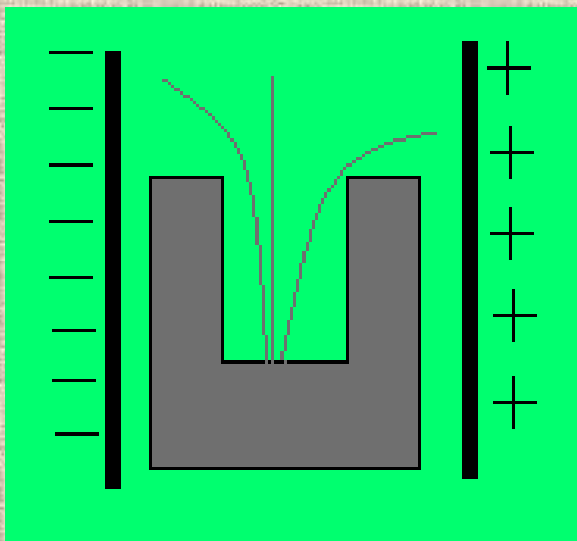
Rasmda magnit maydonida radioaktiv moddaning nurlanishi tadqiqot qilingan.



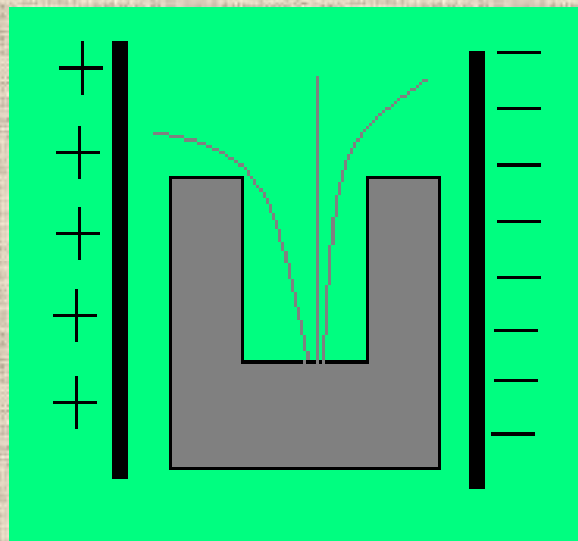
- **Qanday nurlar kichik burchaklarga egiladi?**
- **Qanday nurlar katta burchaklarga egiladi?**
- **Qanday nurlar egiladi?**

Al'fa va beta – nurlar zaryadi belgilarini aniqlash uchun rasmda ko'rsatilgandek, elektr maydondan foydalanish mumkin.

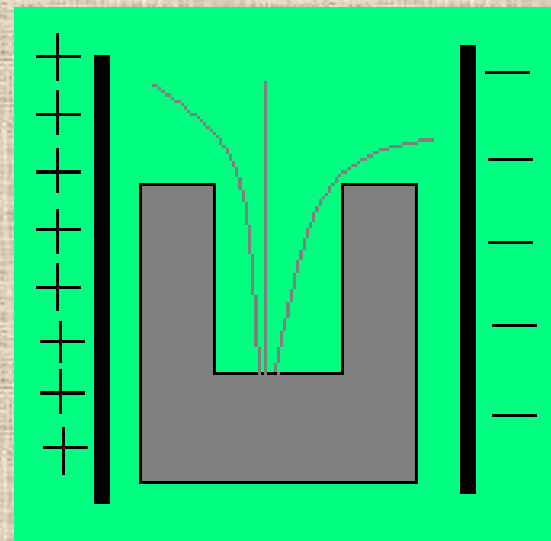
Bu yerda nurlarning egilishi noto'g'ri ko'rsatilgan?



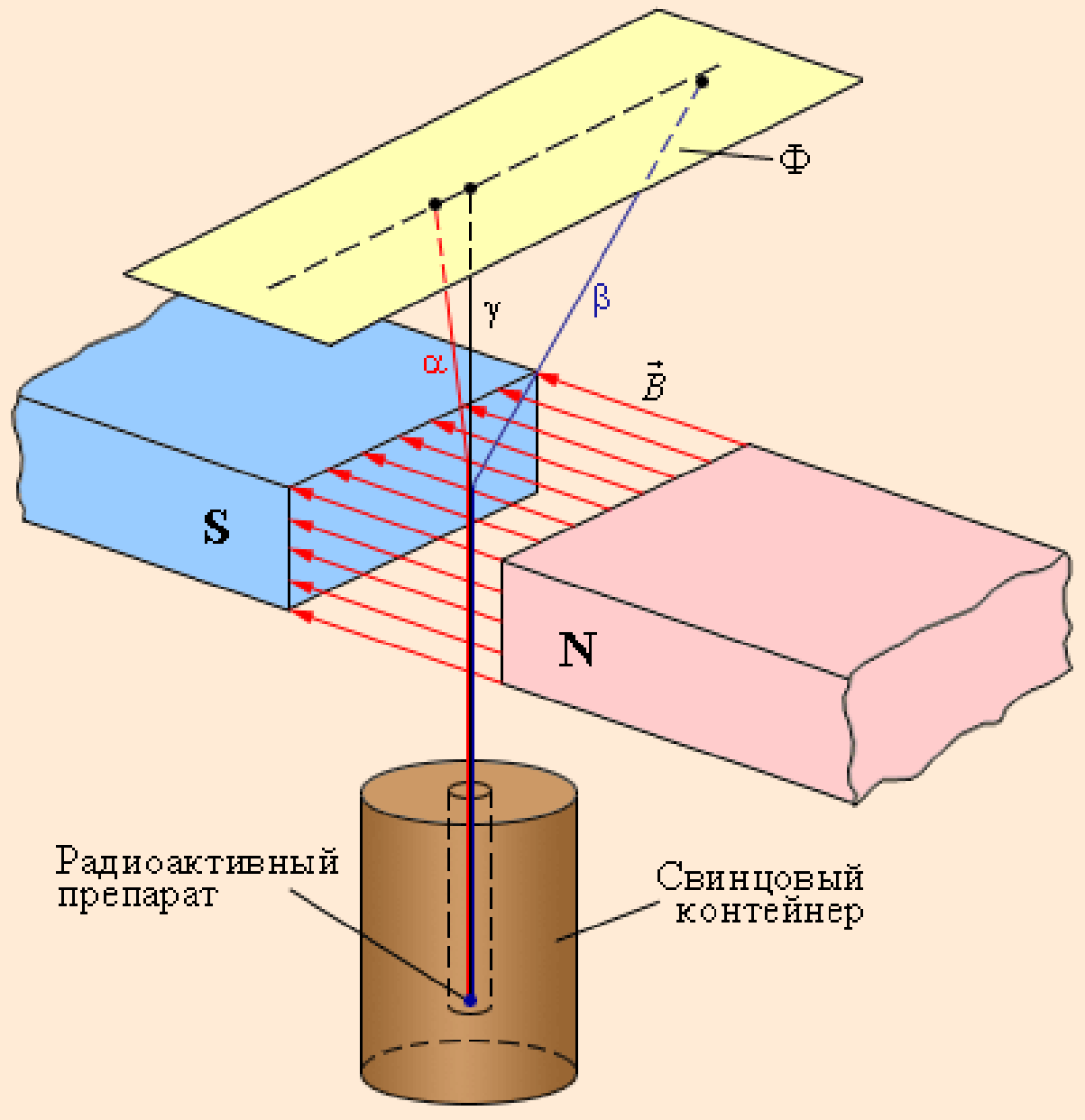
1- rasm



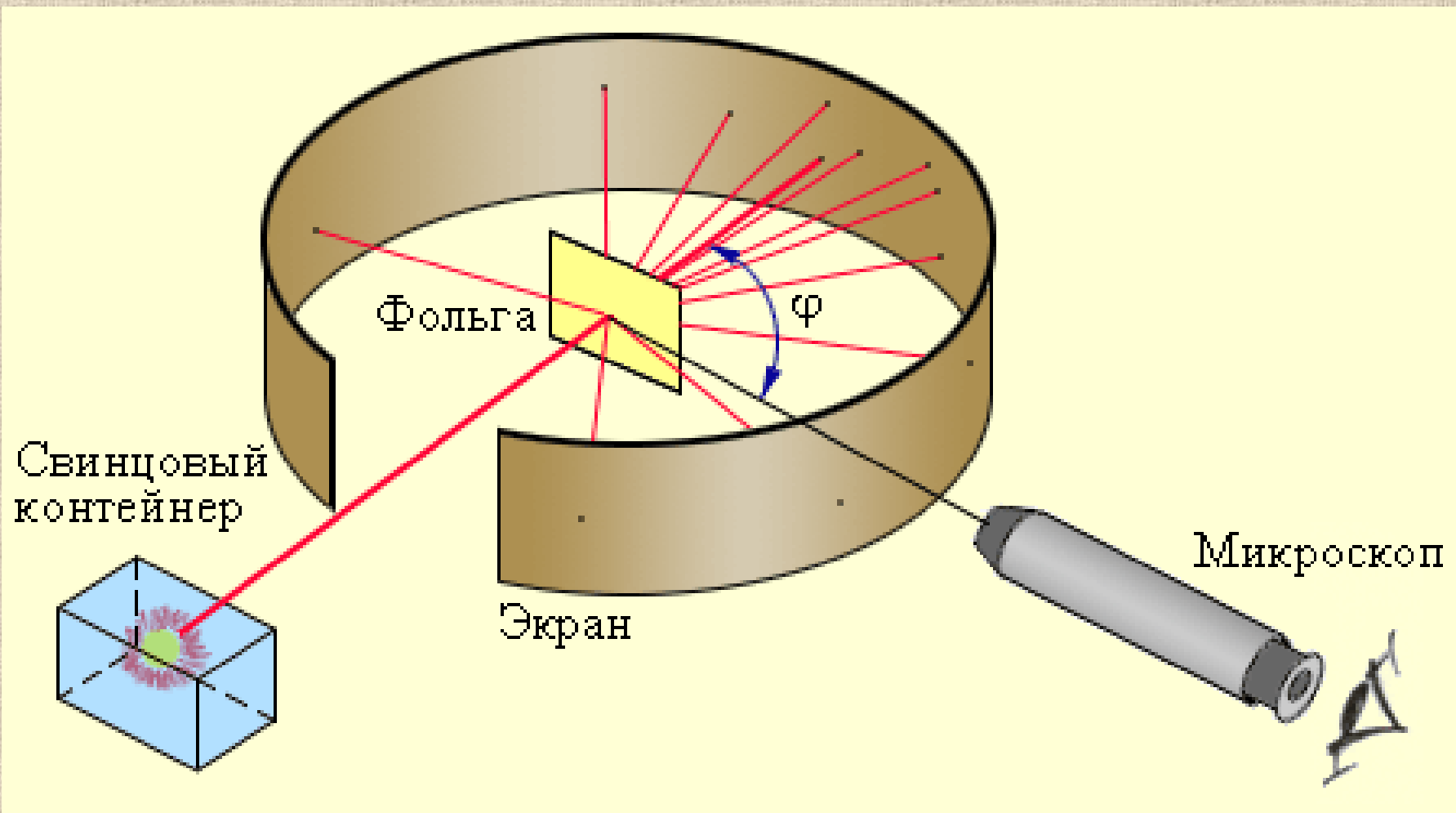
2 - rasm



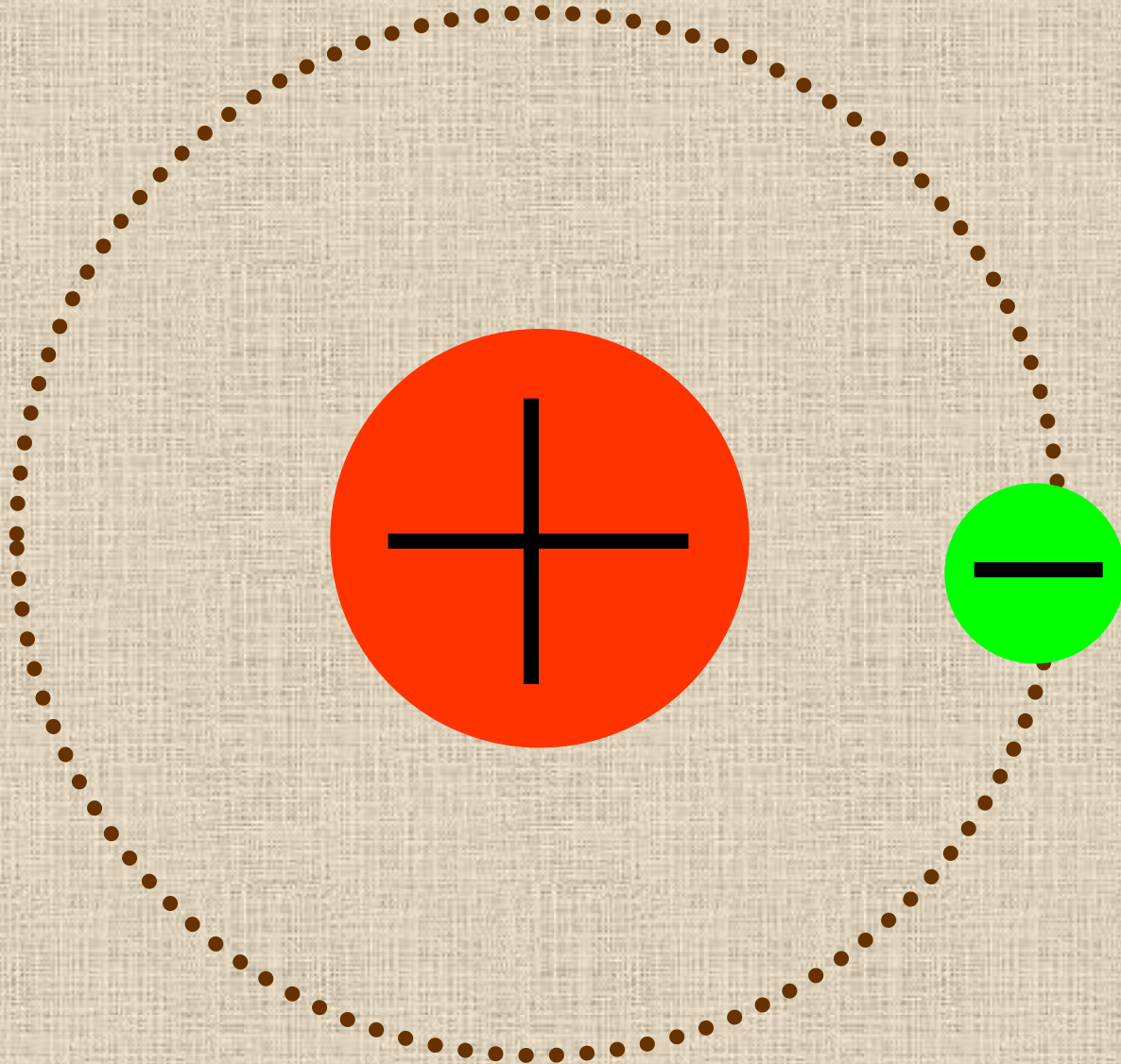
3 - rasm







# Xulosa:





protonlar



neytronlar



