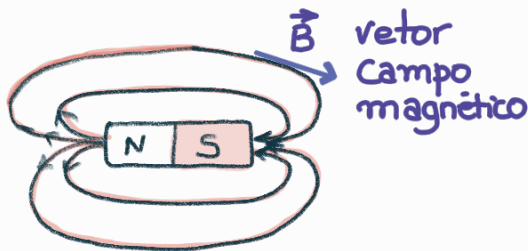


# Eletromagnetismo

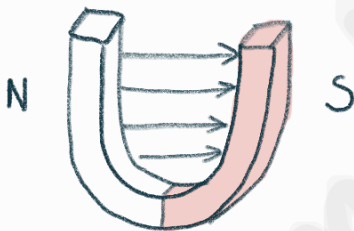
## Campo magnético



### linhas de campo

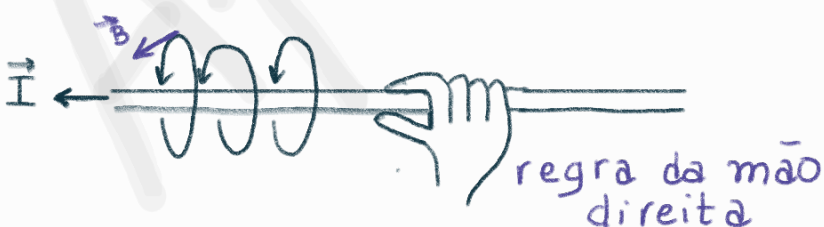
- sai polo norte
- entram polo sul
- são fechadas
- não se cruzam

### [Imã Ferradura]

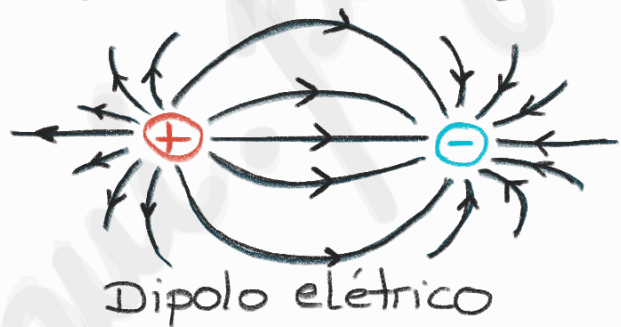
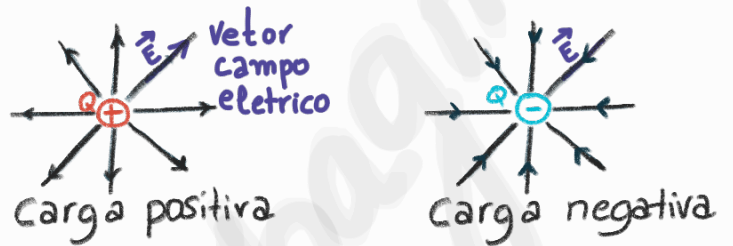


Campo magnético Uniforme  
 $\vec{B}$  tem igual direção, sentido e intensidade.

### [Condutor circular]

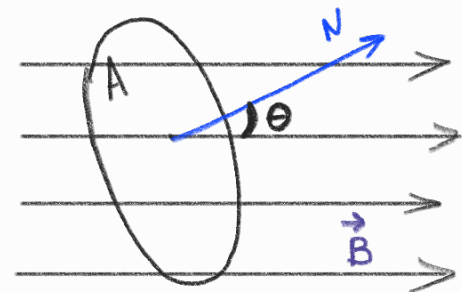


## Campo elétrico



## Fluxo magnético

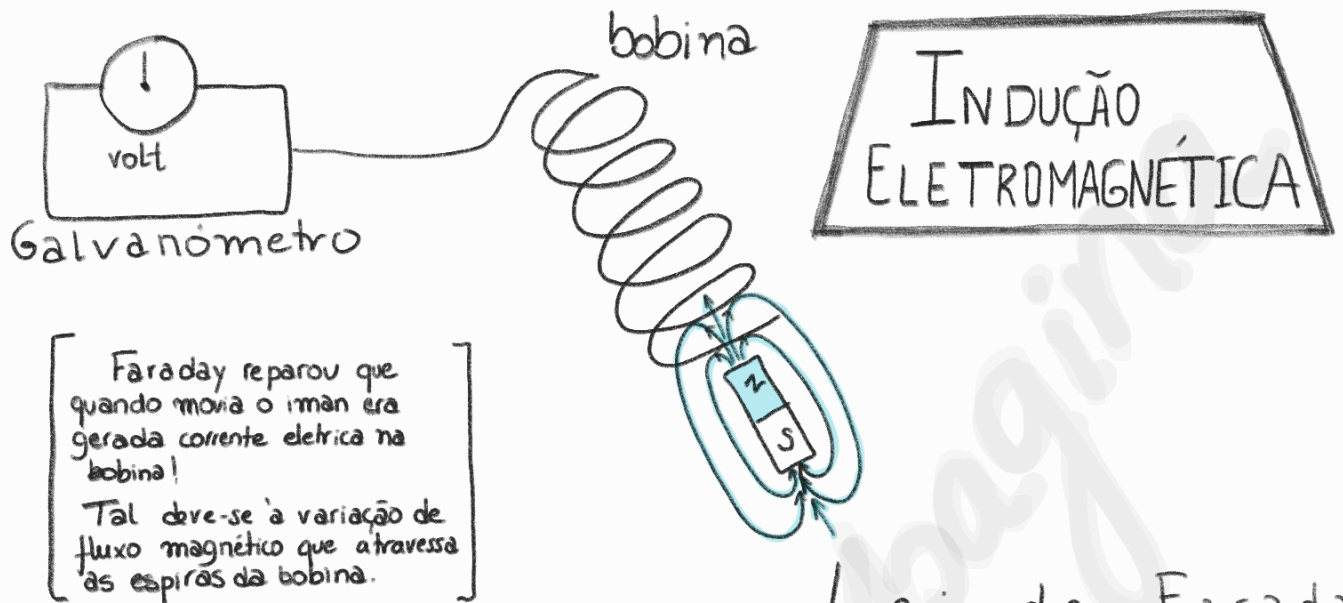
atraves de uma espira



$$\phi_m = |\vec{B}| A \cos \theta$$

Wb      T      m<sup>2</sup>

# Experiência de Faraday



Lei de Faraday

$$\mathcal{E} = \frac{\Delta \Phi_m}{\Delta t} \rightarrow \text{wb}$$

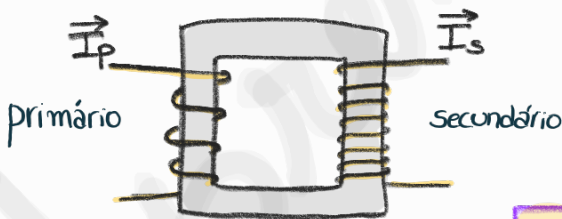
v                      s

## Transformadores (alteram a Tensão, U)

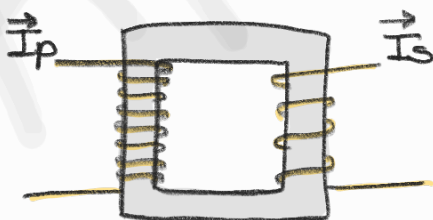
- Para diminuir as perdas por efeito de joule  $P_d = RI^2$ ,
- é necessário diminuir a corrente elétrica, I, sem perda **PROBLEMA**
- de Potência elétrica, P, logo aumentando a Tensão, U.



Aumentar U



Diminuir U



Transporte faz-se em alta Tensão!



$$\frac{N_s}{N_p} = \frac{U_s}{U_p} = \frac{I_p}{I_s}$$

↑  
nº de espiras