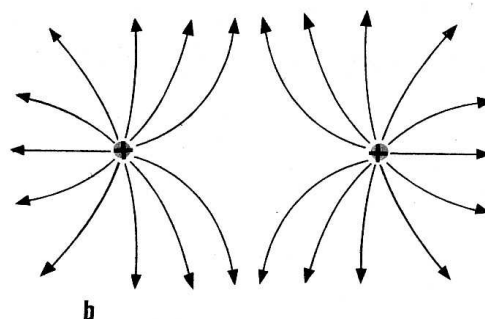
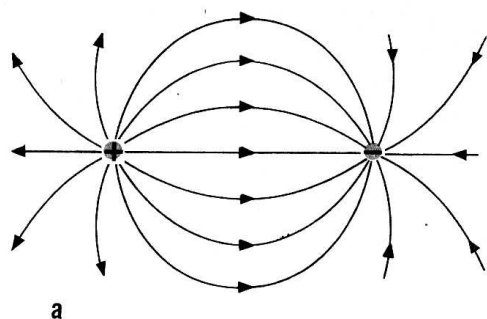


Elektrické pole

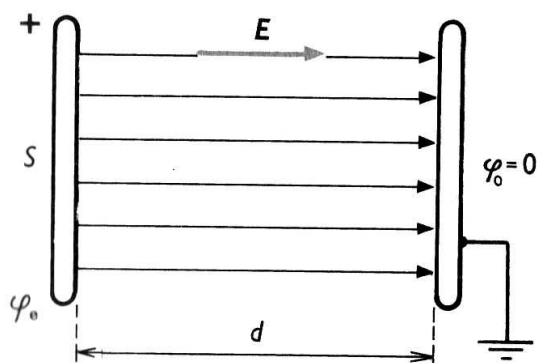
$$Q = N \cdot e, \quad e = 1,602 \cdot 10^{-19} \text{C}, \quad N = 1, 2, 3 \dots$$



$$E = \frac{1}{4\pi\epsilon} \frac{Q}{r^2}, \quad \epsilon - \text{permitivita}$$

V elektrickom poli na náboj q pôsobí sila (elektrická):

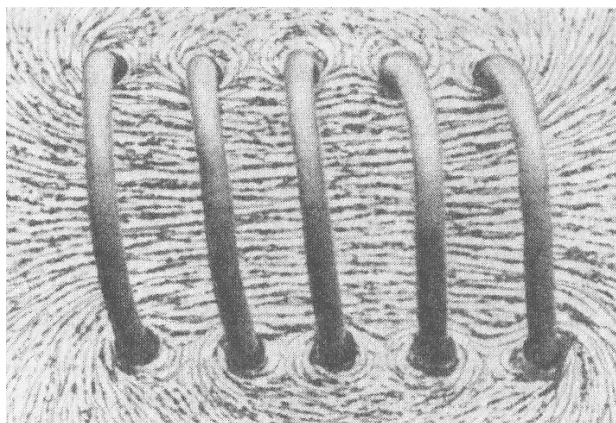
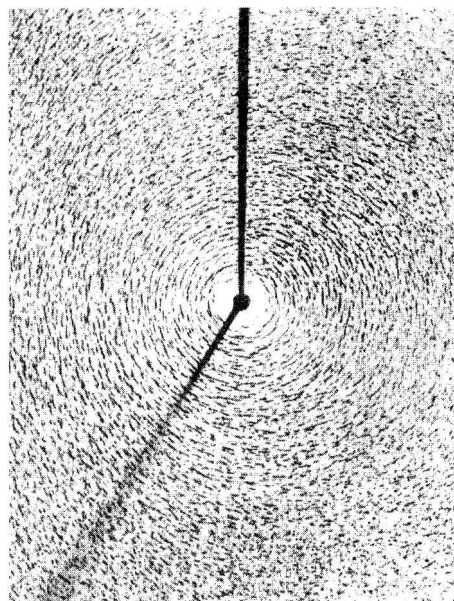
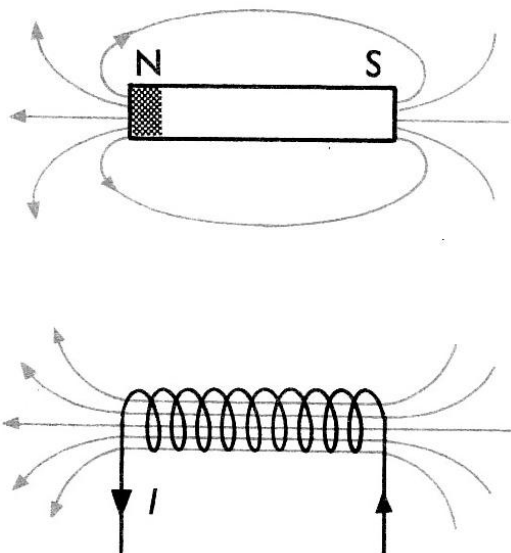
$$F_e = q \cdot E \quad [E] = \frac{N}{C}$$



$$E = \frac{U}{d}, \quad [E] = \frac{V}{m}$$

Magnetické polia

- okolo magnetov a vodičov s prúdom



$$B = \mu H$$

$$[B] = T$$

$$H = N \frac{I}{l} \quad [H] = A/m$$

μ – permeabilita

V magnetickom poli pôsobí na pohybujúci sa náboj magnetická sila: ($v \perp B$)

$$F_m = B \cdot e \cdot v$$

resp.

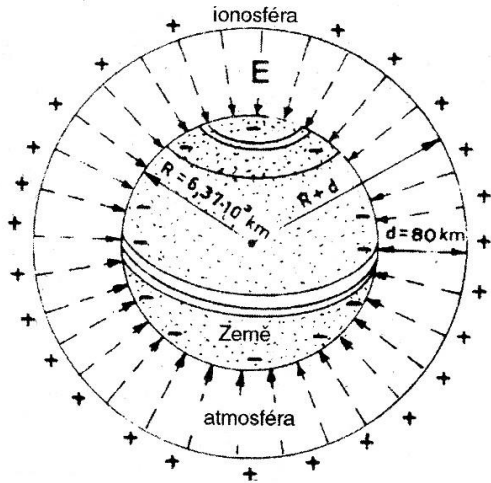
$$F_m = B \cdot q \cdot v, \quad q = N \cdot e$$

Sila pôsobiaca na vodič s prúdom v magnetickom poli:

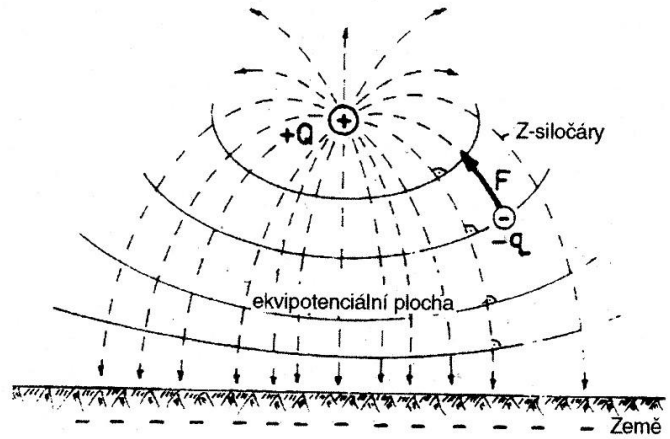
$$F_m = B \cdot I \cdot l \cdot \sin \alpha$$

Elektrické pole – (EP)

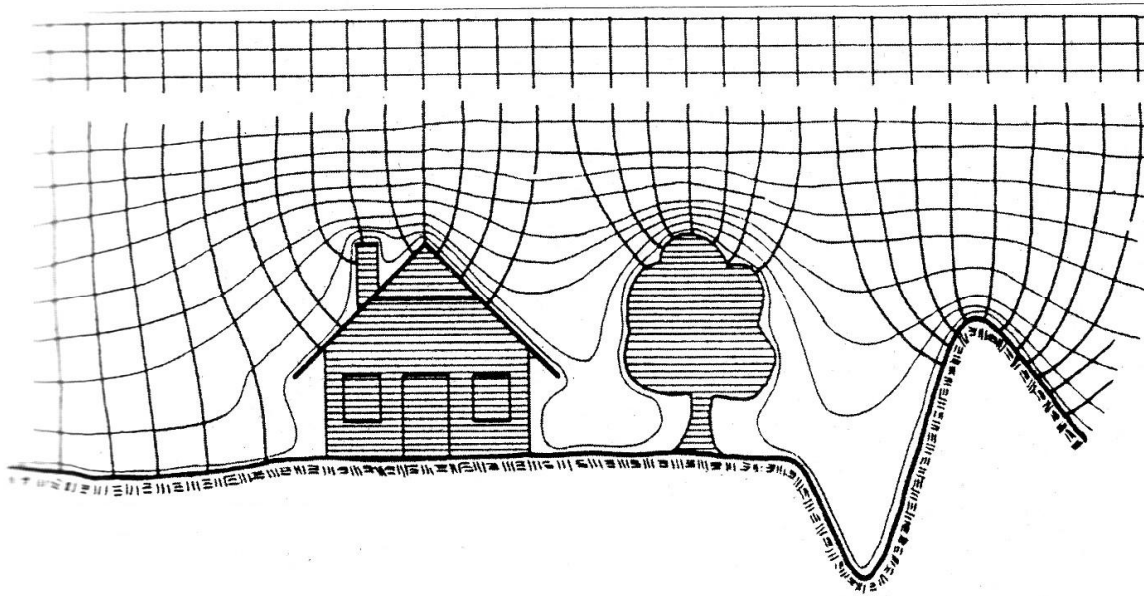
EP Zeme



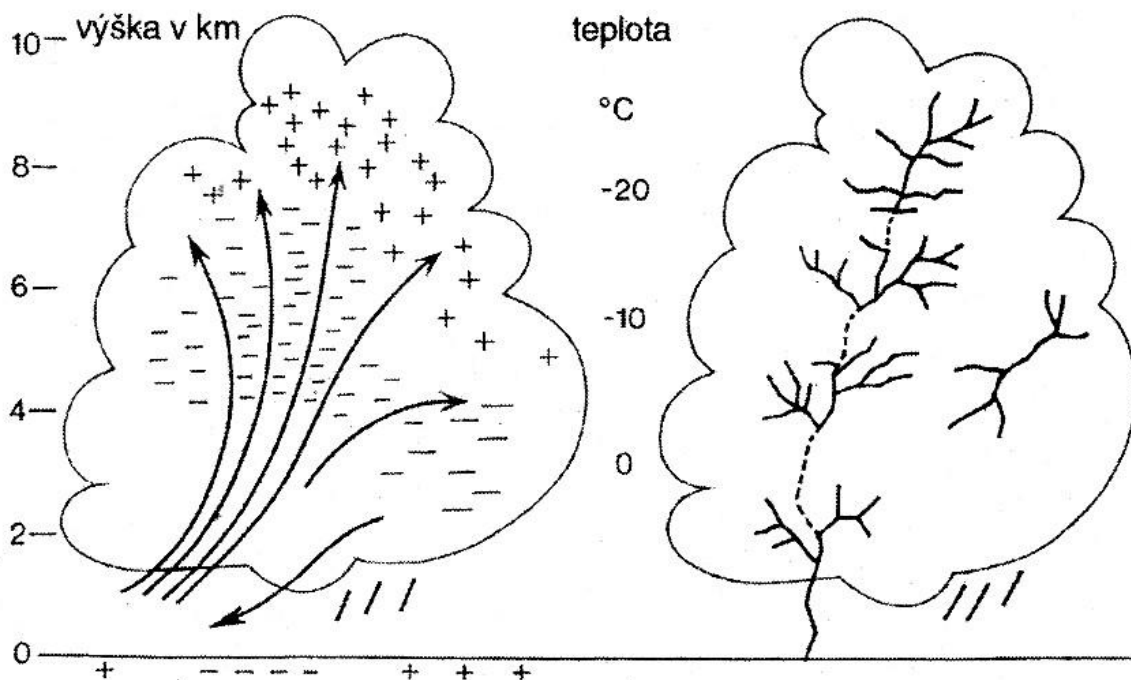
Náboj Q v EP Zme



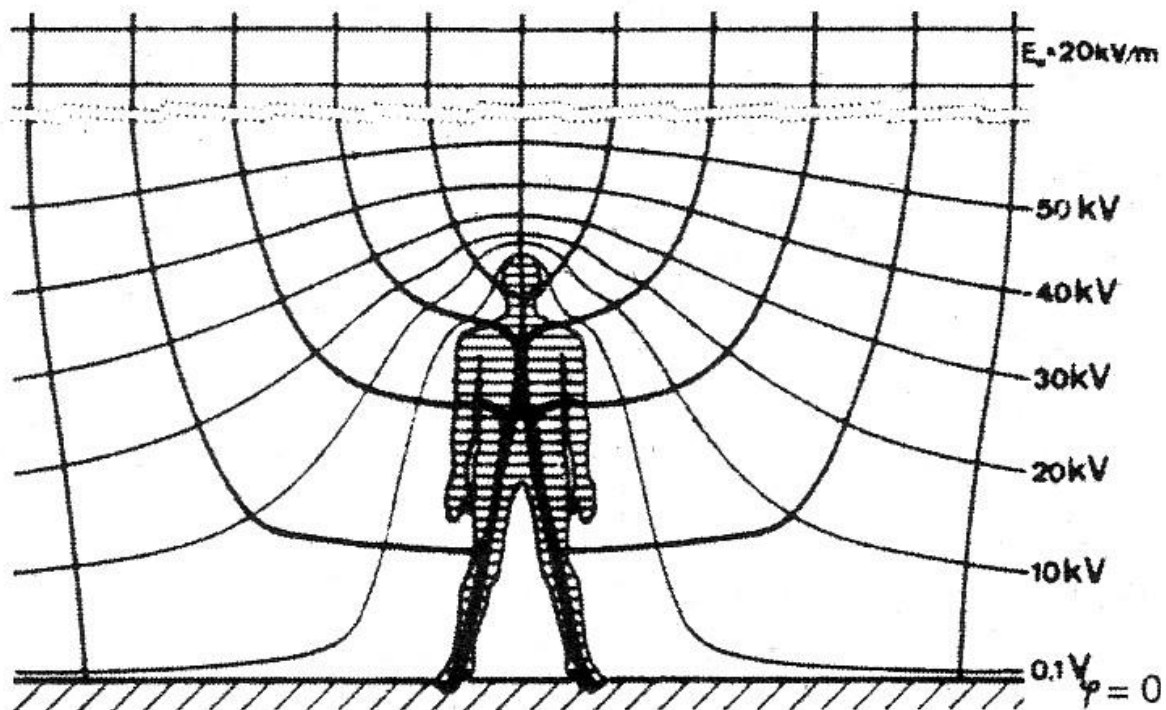
Deformácia elektrického poľa Zeme



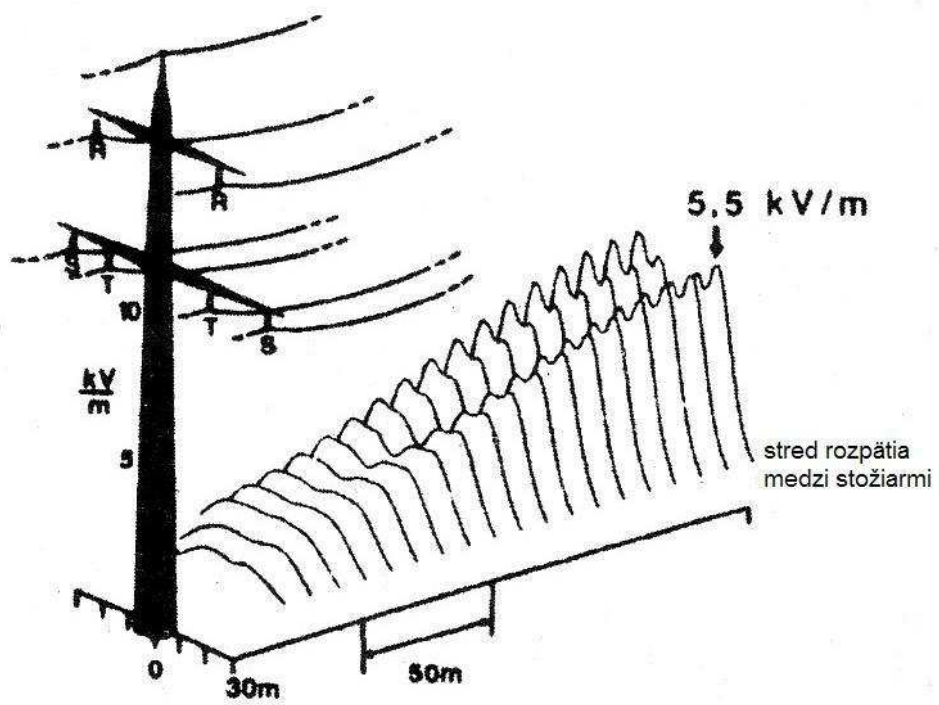
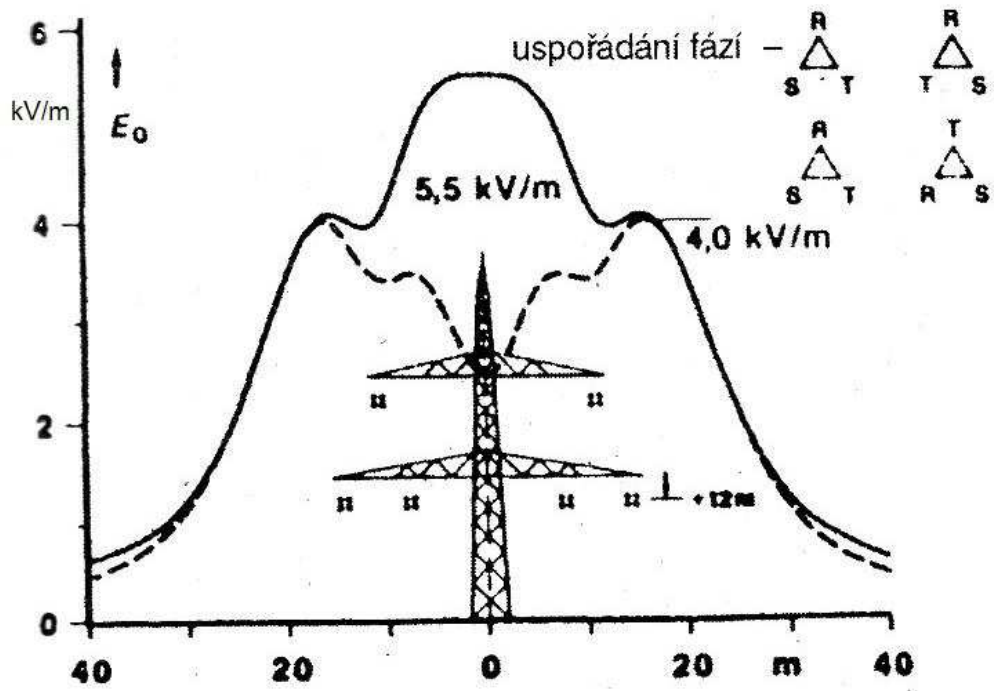
Rozdelenie nábojov v mrakoch



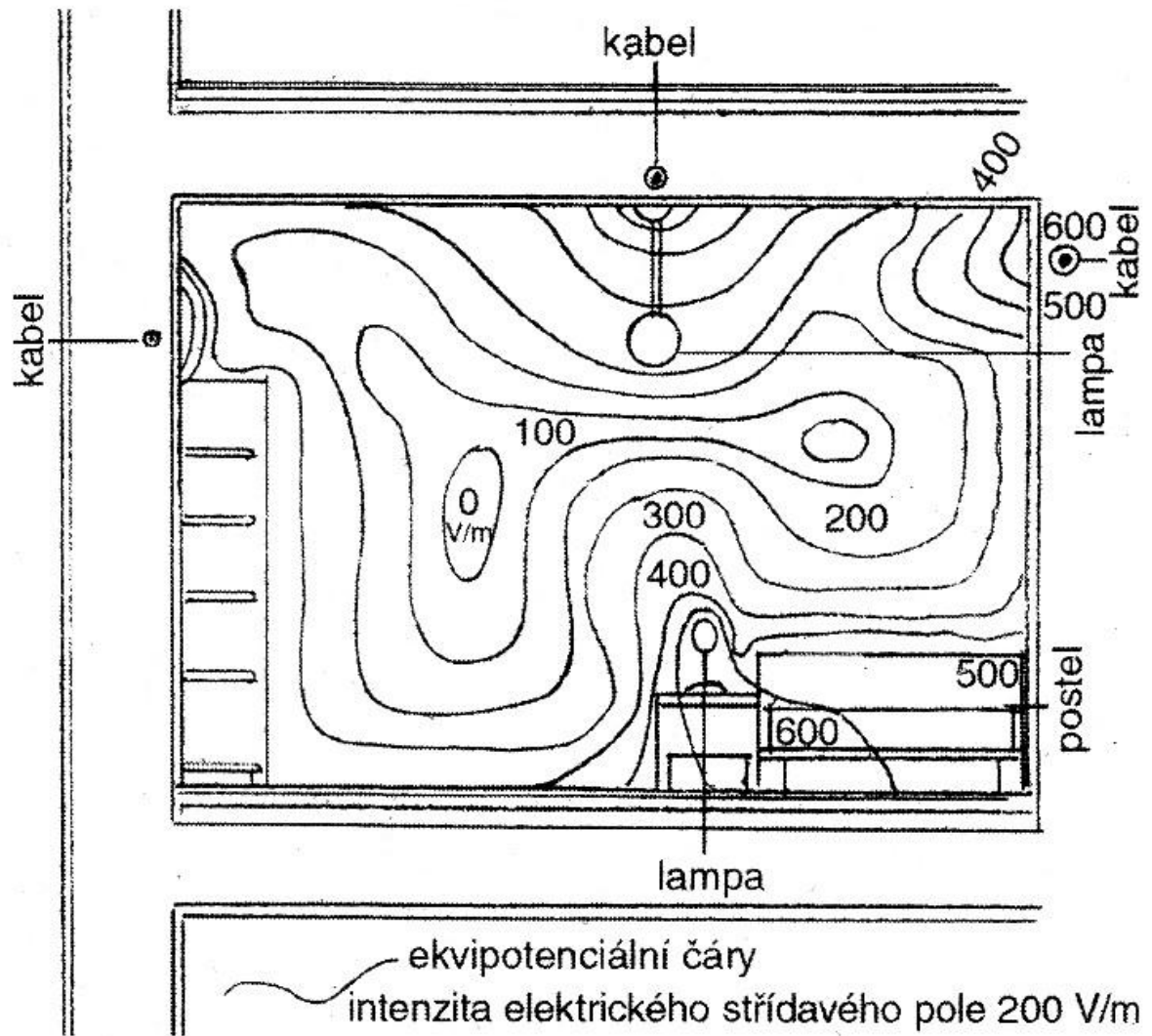
Deformácia elektrického poľa človekom



Elektrické polia okolo vedení vysokého napätia



Elektrické polia v byte



Magnetické pole okolo vysokého vedenia

