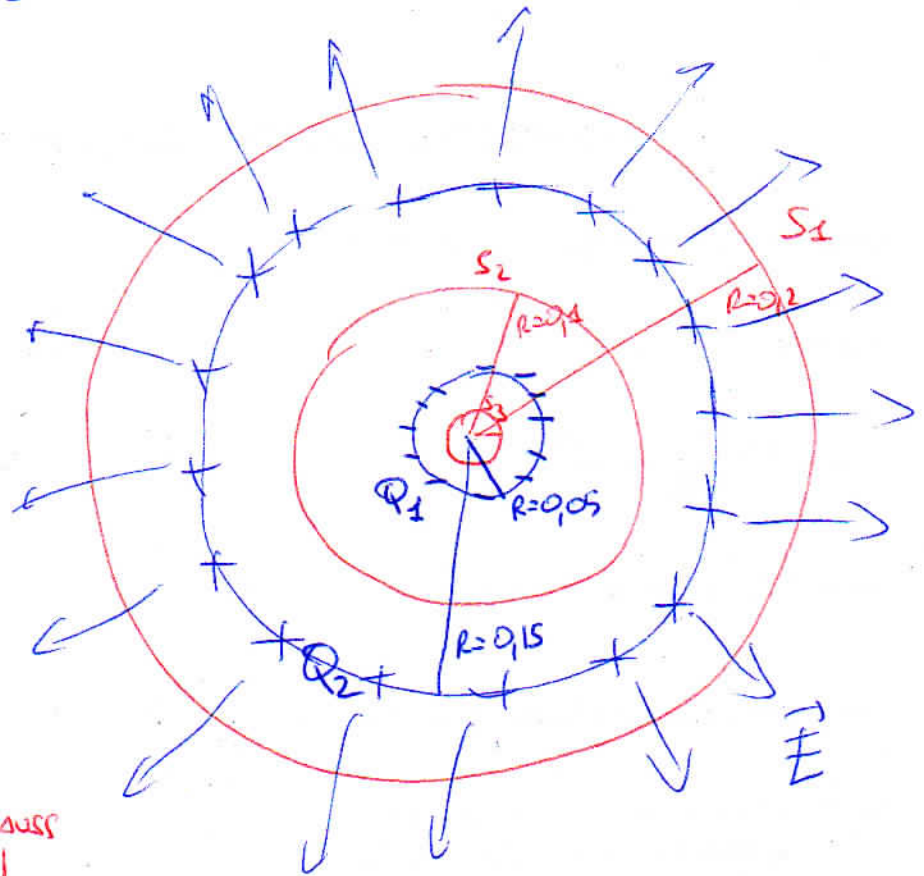


$$Q_1 = -1,6 \cdot 10^{-6} \text{ C}$$

$$Q_2 = +5,1 \cdot 10^{-6} \text{ C}$$



T. GAUSS

$$\Phi_{S_{P1}}(\vec{E}) = E \cdot A \cdot \cos 0^\circ = \frac{Q_1 + Q_2}{\epsilon_0}$$

$$E = \frac{Q_1 + Q_2}{A \cdot \epsilon_0} = \frac{(-1,6 + 5,1) \cdot 10^{-6} \text{ C}}{4\pi (0,2 \text{ m})^2 \cdot 8,85 \cdot 10^{-12} \frac{\text{C}^2}{\text{Nm}^2}} = 7,86 \cdot 10^5 \frac{\text{N}}{\text{C}}$$

VERSO ESTERNO

$$\Phi_{S_{P2}}(\vec{E}) = E \cdot A = \frac{Q_2}{\epsilon_0}$$

$$E = \frac{Q_2}{A \cdot \epsilon_0} = \frac{(-1,6 \cdot 10^{-6}) \text{ C}}{(4\pi \cdot 0,1 \text{ m})^2 \cdot 8,85 \cdot 10^{-12} \frac{\text{C}^2}{\text{Nm}^2}} = -1,43 \cdot 10^5 \frac{\text{N}}{\text{C}}$$

VERSO L'INTERNO

$$\Phi_{S_{P3}}(\vec{E}) = E \cdot A = \frac{0}{\epsilon_0} \text{ CARICA INTERNA} \rightarrow E = 0$$

IL CAMPO \vec{E} È NULLO ALL'INTERNO