Answer on Question   #82468, Physics / Electromagnetism

Question:

why the electric field for non-conducting charged plane is surface charge density over 2epsulum while it equal surface charge denisty over epsulm only on conductor case

Solution:

In accordance with Gauss's theorem an electric field strength of a charged plane equals to

$$E = \frac{\sigma}{2\varepsilon_0}$$, σ - surface charge density . If we regard an electric *capacitor* we have two different

plates with opposite charges, the net electric field strength in this case is the vector sum of electric

fields strengths generated by each plate, and this sum equals to $E_n = \frac{\sigma}{\varepsilon_0}$.

The answer:

Please see the explanation above.