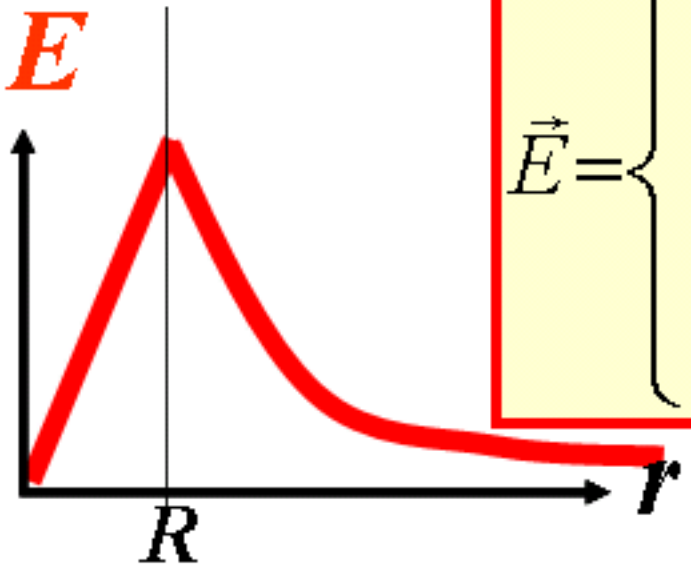

$$\vec{E}=\begin{cases} r\le R:\ \vec{E}=\dfrac{\rho\vec{r}}{3\varepsilon_0} \\ r\ge R:\ \vec{E}=\dfrac{\rho R^3\hat{r}}{3\varepsilon_0 r^2} \end{cases}$$