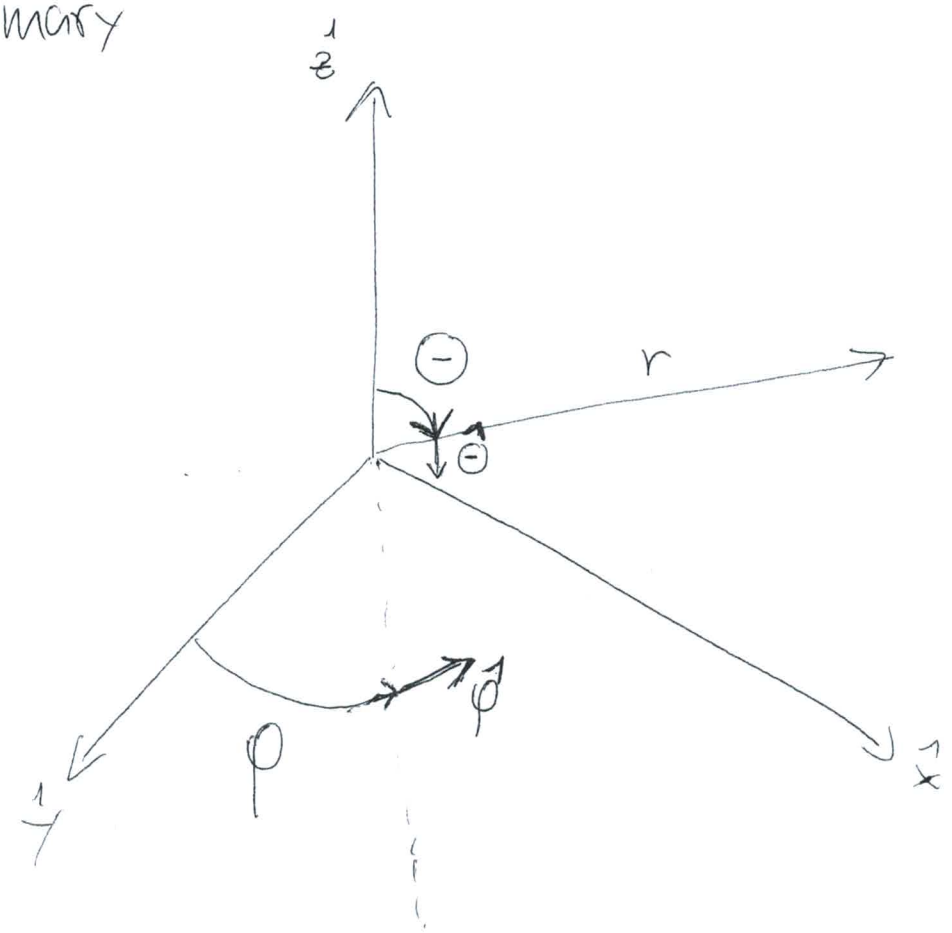
Summary



at $d \ll \frac{c}{w} = \frac{\lambda}{2\pi} \ll r$

$$\phi(r,\Theta,t) = \frac{p_0}{4\pi\varepsilon_0} \frac{\cos\Theta}{r} \frac{w}{c} \sin\left(w\left(t+\frac{r}{c}\right)\right)$$

$$\vec{A}(r,\Theta,t) = -\frac{\mu_0}{4\pi} p_0 \frac{w}{r} \sin\left(w\left(t+\frac{r}{c}\right)\right) \vec{z}$$