

x - y - z
 ϕ θ ψ

$$\psi = 90^\circ$$

$$\begin{bmatrix} \cos \psi & \sin \psi & 0 & x_R \\ -\sin \psi & \cos \psi & 0 & -y_R \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$