$$A := \begin{bmatrix} \cos(\psi) & \sin(\psi) & 0 \\ -\sin(\psi) & \cos(\psi) & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} \cos(\psi) & \sin(\psi) & 0 \\ -\sin(\psi) & \cos(\psi) & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$B := \begin{bmatrix} 1 & 0 & 0 \\ 0 & \cos(\theta) & \sin(\theta) \\ 0 & -\sin(\theta) & \cos(\theta) \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & \cos(\theta) & \sin(\theta) \\ 0 & -\sin(\theta) & \cos(\theta) \end{bmatrix}$$

$$C := \begin{bmatrix} \cos(\phi) & \sin(\phi) & 0 \\ -\sin(\phi) & \cos(\phi) & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} \cos(\phi) & \sin(\phi) & 0 \\ -\sin(\phi) & \cos(\phi) & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$R := CBA$$

$$\begin{bmatrix} \cos(\phi)\cos(\psi) - \sin(\phi)\cos(\theta)\sin(\psi) & \cos(\phi)\sin(\psi) + \sin(\phi)\cos(\theta)\cos(\psi) & \sin(\phi)\sin(\theta) \\ -\sin(\phi)\cos(\psi) - \cos(\phi)\cos(\theta)\sin(\psi) & -\sin(\phi)\sin(\psi) + \cos(\phi)\cos(\theta)\cos(\psi) & \cos(\phi)\sin(\theta) \\ \sin(\psi)\sin(\theta) & -\cos(\psi)\sin(\theta) & \cos(\theta) \end{bmatrix}$$