



$$\varphi_{12} = \omega_{12} \cdot t$$

$$S_{23} = S_{230} + \Omega_{23} \cdot t$$

$$\underline{r}_{12} = \underline{T}_{13} \cdot \underline{r}_{3L}$$

$$\underline{T}_{13} = \underline{T}_{12} \cdot \underline{T}_{23}$$

$$\underline{T}_{12} = \underline{T}_{\varphi}(\varphi_{12})$$

$$\underline{T}_{23} = \underline{T}_X(S_{23})$$

$$\underline{r}_{3L} = \begin{bmatrix} l_3 \cos \delta \\ l_3 \sin \delta \\ 1 \end{bmatrix}$$