$$E_LSCM = \sum_{T} A_T \left\| M_T v_T - \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} M_T u_T \right\|_2^2$$

where

$$\begin{aligned} v_T &\in \mathbb{R}^3 \\ u_T &\in \mathbb{R}^3 \\ M_T &\in \mathbb{R}^{2\times 3} \\ A_T &\in \mathbb{R} \end{aligned}$$