$\mathbf{?}$
W
$Img =$
$\{I_1, I_2, \ldots, I_m\}mm$
K_i
$E_{K_i W}$
Img
$P =$
$P_W =$
$\{\mathbf{p}_{1W}, \ldots, \mathbf{p}_{sW}\}j$
$\mathbf{p}_{jW} =$
$(p_{jx}, p_{jy}, p_{jz}, 1)$

$$\mathbf{p}_{jK_{t+1}} = E_{K_{t+1}W}\mathbf{p}_{jW} \tag{1}$$

$\mathbf{?}R^3$
R^2

$$f(x, y, z, 1) = (u_0, v_0) + (x/z, y/z)f_u 00 f_v \frac{r'}{r} \tag{2}$$

$$r = \sqrt{\frac{x^2 + y^2}{z^2}} \tag{3}$$

$$r' = \frac{1}{\omega} arctan(2rtan\frac{\omega}{2}) \tag{4}$$

$f_u, f_v(u_0, v_0)\omega$
T

$$E_{K_{t+1}W} = TE_{K_tW} = exp(\mu)E_{K_tW} \tag{5}$$

μ
T
$(u, v)\mu, T$
$p(\hat{u}, \hat{v})$
$\mathbf{?}$
$(\hat{u}, \hat{v})$
$\sigma =$
$?^l$
P_{t+1}

$$\mu argmin \sum_{j \in P_{t+1}} \psi(\frac{\mathbf{e}_j}{\sigma_j}, \sigma_T) \tag{6}$$

$$\mathbf{e}_j = (\hat{u_j}, \hat{v_j}) - f(exp(\mu)E_{K_tW}\mathbf{p_j}) \tag{7}$$

ψ
$\mathbf{?}$

$$\psi(x, c) = \{ x\ (1 - \frac{x^2}{c^2}) for|x| < c0 for|x| > c \tag{8}$$

$$\{\mu\}, \{\mathbf{p}\}argmin = \sum_{i=1}^{N} \sum_{j \in P_i} \psi(\frac{\mathbf{e}_j}{\sigma_j}, \sigma_T) \tag{9}$$

$\mathbf{?}_process$