



$$\begin{cases} \frac{x}{f} = \frac{x_w}{H - z_w} \\ \frac{y}{f} = \frac{y_w}{H - z_w} \end{cases} \quad \begin{cases} v - C_v = x \cdot x2v \\ u - C_u = y \cdot y2u \end{cases}$$

$P_w = (b.x, b.y, b.z)$  代入 ( $b = \text{bound}$ )

$$\begin{cases} x = \frac{f}{H - b.z} \cdot b.x \\ y = \frac{f}{H - b.z} \cdot b.y \end{cases} \rightarrow \begin{cases} x2v = \frac{-C_v}{x} \\ y2u = \frac{-C_u}{y} \end{cases}$$

归一化

$$\rightarrow \begin{cases} x2u = \frac{-C_v}{b.x} \cdot \frac{H}{f} \\ y2u = \frac{-C_u}{b.y} \cdot \frac{H}{f} \end{cases}$$