$$
\begin{array}{ccccccccc}
\cdots & \longleftarrow & (P^{-2}, Y) & \longleftarrow & (P^{-1}, Y) & \longleftarrow & (P^0, Y) & \longleftarrow & (X, Y) \\
& & \downarrow & & \downarrow & & \downarrow & & \downarrow \\
\cdots & \longleftarrow & (P^{-2}, I^0) & \longleftarrow & (P^{-1}, I^0) & \longleftarrow & (P^{-1}, I^0) & \longleftarrow & (X, I^0) \\
& & \downarrow & & \downarrow & & \downarrow & & \downarrow \\
\cdots & \longleftarrow & (P^{-2}, I^1) & \longleftarrow & (P^{-1}, I^1) & \longleftarrow & (P^{-1}, I^1) & \longleftarrow & (X, I^1) \\
& & \downarrow & & \downarrow & & \downarrow & & \downarrow \\
\cdots & \longleftarrow & (P^{-2}, I^2) & \longleftarrow & (P^{-1}, I^2) & \longleftarrow & (P^{-1}, I^2) & \longleftarrow & (X, I^2) \\
& & \downarrow & & \downarrow & & \downarrow & & \downarrow \\
& & \vdots & & \vdots & & \vdots & & \vdots
\end{array}
$$