$$\begin{array}{ccccc}
\pi_{2p-1}(S^{2p-1}) & \xrightarrow{\tilde{g}_*} & \pi_{2p-1}(\widetilde{S^2_{p-1}}) & \xrightarrow{\widetilde{f_{p-1}}_*} & \pi_{2p-1}(S^{2p-1}) \\
\Big\| {\scriptstyle =} & & \Big\downarrow {\scriptstyle \rho_{p-1*}} & & \Big\downarrow {\scriptstyle \cong} \\
\pi_{2p-1}(S^{2p-1}) & \xrightarrow{g_*} & \pi_{2p-1}(S^2_{p-1}) & \xrightarrow{f_{p-1*}} & \pi_{2p-1}(\mathbb{C}P^{p-1}) \\
{\scriptstyle \partial}\Big\uparrow{\scriptstyle \times p} & & {\scriptstyle \partial}\Big\uparrow & & {\scriptstyle \partial}\Big\uparrow{\scriptstyle \cong} \\
\pi_{2p}(Y^{2p},S^{2p-1}) & \xrightarrow[\times x]{\overline{g}_*} & \pi_{2p}(S^2_p,S^2_{p-1}) & \xrightarrow[\times p!]{f_p*} & \pi_{2p}(\mathbb{C}P^p,\mathbb{C}P^{p-1})
\end{array}$$