$$\begin{array}{c}
\mathbf{P}_1 & \xrightarrow{\int_1} \mathbf{N} \mathbf{S}_1 \\
f \downarrow \mathbf{NSet} & \mathbf{NSet} \\
\mathbf{P}_2 & \xrightarrow{f} \mathbf{S}_2
\end{array}$$