

$$\begin{array}{ccccc}
\Omega(A) & \xhookrightarrow{\iota_A} & P & \xrightarrow{\pi_A} & \twoheadrightarrow A \\
\parallel & & \downarrow p_{\phi_1^A} & & \downarrow \phi_1^A \\
\Omega(A) & \xhookrightarrow{\kappa_{\Omega(A)}} & I & \xrightarrow{\rho_{\Omega(A)}} & \Sigma \circ \Omega(A) \\
\downarrow \Omega(f) & & \downarrow i_{\Omega(f)} & & \downarrow \Sigma \circ \Omega(f) \\
\Omega(B) & \xhookrightarrow{\kappa_{\Omega(B)}} & I & \xrightarrow{\rho_{\Omega(B)}} & \Sigma \circ \Omega(B)
\end{array}$$